

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 9

Approximate IEC* Standard Metric Size 3.55
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 7

Cir Mils	20,736.00
Sq Mils	16,286.05
Sq MM	10.50176
Sq Cm	0.1050176
Sq Inches	0.016277760

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.1440	3.6576
Nominal Coated Wire Diameter	0.1487	3.7770
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.1682	4.2718
Width of Slot for Machine Insertion	0.1437	3.6500
Length of Cut for Radius Cut	0.5743	14.5867
Depth of Cut for Radius Cut	0.5384	13.6764
Depth of Cut for Non-Radius Cut	0.4781	12.1430
Fusing Electrode Tip Diameter	0.2083	5.2914
Orient Blade Thickness	0.1401	3.5587
Stuffing Blade Thickness	0.1293	3.2850
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.4717	11.9806
Mimumun Tang Width	0.1483	3.7673
Minimum Tang Thickness	0.1413	3.5892
Minimum Tang Radius	0.0843	2.1402
Height of Tang Projection for Aluminum Wire ± 5%	0.1032	2.6214

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 10

Approximate IEC* Standard Metric Size 3.35
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 8

Cir Mils	16,384.00
Sq Mils	12,867.99
Sq MM	8.29769
Sq Cm	0.0829769
Sq Inches	0.012861440

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.1280	3.2512
Nominal Coated Wire Diameter	0.1325	3.3655
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.1499	3.8064
Width of Slot for Machine Insertion	0.1277	3.2436
Length of Cut for Radius Cut	0.5117	12.9976
Depth of Cut for Radius Cut	0.4798	12.1865
Depth of Cut for Non-Radius Cut	0.4260	10.8201
Fusing Electrode Tip Diameter	0.1856	4.7150
Orient Blade Thickness	0.1245	3.1625
Stuffing Blade Thickness	0.1149	2.9192
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.4203	10.6754
Mimumun Tang Width	0.1318	3.3487
Minimum Tang Thickness	0.1256	3.1904
Minimum Tang Radius	0.0751	1.9071
Height of Tang Projection for Aluminum Wire ± 5%	0.0917	2.3301

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 11

Approximate IEC* Standard Metric Size 3.0
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 9

Cir Mils	13,456.00
Sq Mils	10,568.34
Sq MM	6.81480
Sq Cm	0.0681480
Sq Inches	0.010562960

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.1160	2.9464
Nominal Coated Wire Diameter	0.1203	3.0556
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.1361	3.4559
Width of Slot for Machine Insertion	0.1157	2.9388
Length of Cut for Radius Cut	0.4646	11.8008
Depth of Cut for Radius Cut	0.4356	11.0644
Depth of Cut for Non-Radius Cut	0.3868	9.8238
Fusing Electrode Tip Diameter	0.1685	4.2808
Orient Blade Thickness	0.1128	2.8653
Stuffing Blade Thickness	0.1041	2.6449
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.3816	9.6924
Mimumun Tang Width	0.1195	3.0348
Minimum Tang Thickness	0.1138	2.8913
Minimum Tang Radius	0.0682	1.7315
Height of Tang Projection for Aluminum Wire ± 5%	0.0831	2.1117

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number **12**

Approximate IEC* Standard Metric Size **2.65**
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) **10**

Cir Mils	10,816.00
Sq Mils	8,494.89
Sq MM	5.47777
Sq Cm	0.0547777
Sq Inches	0.008490560

SWG SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.1040	2.6416
Nominal Coated Wire Diameter	0.1080	2.7432
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.1221	3.1026
Width of Slot for Machine Insertion	0.1037	2.6340
Length of Cut for Radius Cut	0.4171	10.5942
Depth of Cut for Radius Cut	0.3911	9.9331
Depth of Cut for Non-Radius Cut	0.3472	8.8194
Fusing Electrode Tip Diameter	0.1513	3.8431
Orient Blade Thickness	0.1011	2.5681
Stuffing Blade Thickness	0.0933	2.3706
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.3426	8.7014
Mimumun Tang Width	0.1071	2.7208
Minimum Tang Thickness	0.1021	2.5922
Minimum Tang Radius	0.0612	1.5544
Height of Tang Projection for Aluminum Wire ± 5%	0.0745	1.8932

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number **13**

Approximate IEC* Standard Metric Size **2.36**
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) **11**

Cir Mils	8,832.00
Sq Mils	6,936.65
Sq MM	4.47297
Sq Cm	0.0447297
Sq Inches	0.006933120

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0920	2.3368
Nominal Coated Wire Diameter	0.0958	2.4333
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.1083	2.7521
Width of Slot for Machine Insertion	0.0917	2.3292
Length of Cut for Radius Cut	0.3700	9.3975
Depth of Cut for Radius Cut	0.3469	8.8111
Depth of Cut for Non-Radius Cut	0.3080	7.8231
Fusing Electrode Tip Diameter	0.1342	3.4090
Orient Blade Thickness	0.0894	2.2710
Stuffing Blade Thickness	0.0825	2.0963
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.3039	7.7185
Mimumun Tang Width	0.0948	2.4069
Minimum Tang Thickness	0.0903	2.2931
Minimum Tang Radius	0.0543	1.3788
Height of Tang Projection for Aluminum Wire ± 5%	0.0659	1.6748

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number **14**
 Approximate IEC* Standard Metric Size **2.0**
*International Electrotechnical Commission
 Approx. AWG (American Wire Gauge) **12**

Cir Mils	6,400.00
Sq Mils	5,026.56
Sq MM	3.24128
Sq Cm	0.0324128
Sq Inches	0.005024000

SWG SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0800	2.0320
Nominal Coated Wire Diameter	0.0836	2.1234
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0946	2.4016
Width of Slot for Machine Insertion	0.0797	2.0244
Length of Cut for Radius Cut	0.3229	8.2007
Depth of Cut for Radius Cut	0.3027	7.6890
Depth of Cut for Non-Radius Cut	0.2688	6.8269
Fusing Electrode Tip Diameter	0.1171	2.9749
Orient Blade Thickness	0.0777	1.9738
Stuffing Blade Thickness	0.0717	1.8219
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.2652	6.7356
Mimumun Tang Width	0.0824	2.0930
Minimum Tang Thickness	0.0785	1.9940
Minimum Tang Radius	0.0474	1.2032
Height of Tang Projection for Aluminum Wire ± 5%	0.0573	1.4563

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 15

Approximate IEC* Standard Metric Size 1.8
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 13

Cir Mils	5,184.00
Sq Mils	4,071.51
Sq MM	2.62544
Sq Cm	0.0262544
Sq Inches	0.004069440

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0720	1.8288
Nominal Coated Wire Diameter	0.0754	1.9152
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0853	2.1660
Width of Slot for Machine Insertion	0.0717	1.8212
Length of Cut for Radius Cut	0.2912	7.3963
Depth of Cut for Radius Cut	0.2730	6.9348
Depth of Cut for Non-Radius Cut	0.2424	6.1572
Fusing Electrode Tip Diameter	0.1056	2.6831
Orient Blade Thickness	0.0699	1.7757
Stuffing Blade Thickness	0.0645	1.6391
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.2392	6.0749
Mimumun Tang Width	0.0742	1.8837
Minimum Tang Thickness	0.0707	1.7946
Minimum Tang Radius	0.0427	1.0852
Height of Tang Projection for Aluminum Wire ± 5%	0.0516	1.3107

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 16

Approximate IEC* Standard Metric Size 1.6
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 14

Cir Mils	4,096.00
Sq Mils	3,217.00
Sq MM	2.07442
Sq Cm	0.0207442
Sq Inches	0.003215360

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0640	1.6256
Nominal Coated Wire Diameter	0.0672	1.7069
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0760	1.9305
Width of Slot for Machine Insertion	0.0637	1.6180
Length of Cut for Radius Cut	0.2595	6.5920
Depth of Cut for Radius Cut	0.2433	6.1806
Depth of Cut for Non-Radius Cut	0.2160	5.4876
Fusing Electrode Tip Diameter	0.0941	2.3913
Orient Blade Thickness	0.0621	1.5775
Stuffing Blade Thickness	0.0573	1.4562
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.2132	5.4142
Mimumun Tang Width	0.0659	1.6744
Minimum Tang Thickness	0.0628	1.5952
Minimum Tang Radius	0.0381	0.9672
Height of Tang Projection for Aluminum Wire ± 5%	0.0459	1.1651

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 17

Approximate IEC* Standard Metric Size 1.4
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 15

Cir Mils	3,136.00
Sq Mils	2,463.01
Sq MM	1.58823
Sq Cm	0.0158823
Sq Inches	0.002461760

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0560	1.4224
Nominal Coated Wire Diameter	0.0591	1.5011
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0668	1.6978
Width of Slot for Machine Insertion	0.0557	1.4148
Length of Cut for Radius Cut	0.2282	5.7974
Depth of Cut for Radius Cut	0.2140	5.4356
Depth of Cut for Non-Radius Cut	0.1900	4.8262
Fusing Electrode Tip Diameter	0.0828	2.1031
Orient Blade Thickness	0.0543	1.3794
Stuffing Blade Thickness	0.0501	1.2733
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.1875	4.7616
Mimumun Tang Width	0.0577	1.4651
Minimum Tang Thickness	0.0550	1.3958
Minimum Tang Radius	0.0335	0.8506
Height of Tang Projection for Aluminum Wire ± 5%	0.0401	1.0194

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 18

Approximate IEC* Standard Metric Size 1.25
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 16

Cir Mils	2,304.00
Sq Mils	1,809.56
Sq MM	1.16686
Sq Cm	0.0116686
Sq Inches	0.001808640

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0480	1.2192
Nominal Coated Wire Diameter	0.0509	1.2929
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0576	1.4622
Width of Slot for Machine Insertion	0.0477	1.2116
Length of Cut for Radius Cut	0.1966	4.9930
Depth of Cut for Radius Cut	0.1843	4.6814
Depth of Cut for Non-Radius Cut	0.1636	4.1565
Fusing Electrode Tip Diameter	0.0713	1.8113
Orient Blade Thickness	0.0465	1.1813
Stuffing Blade Thickness	0.0429	1.0904
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.1615	4.1010
Mimumun Tang Width	0.0494	1.2558
Minimum Tang Thickness	0.0471	1.1964
Minimum Tang Radius	0.0288	0.7326
Height of Tang Projection for Aluminum Wire ± 5%	0.0344	0.8738

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 19

Approximate IEC* Standard Metric Size 1.0
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 18

Cir Mils	1,600.00
Sq Mils	1,256.64
Sq MM	0.81032
Sq Cm	0.0081032
Sq Inches	0.001256000

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0400	1.0160
Nominal Coated Wire Diameter	0.0427	1.0846
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0483	1.2267
Width of Slot for Machine Insertion	0.0397	1.0084
Length of Cut for Radius Cut	0.1649	4.1886
Depth of Cut for Radius Cut	0.1546	3.9273
Depth of Cut for Non-Radius Cut	0.1373	3.4869
Fusing Electrode Tip Diameter	0.0598	1.5195
Orient Blade Thickness	0.0387	0.9832
Stuffing Blade Thickness	0.0357	0.9075
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.1354	3.4403
Mimumun Tang Width	0.0412	1.0465
Minimum Tang Thickness	0.0393	0.9970
Minimum Tang Radius	0.0242	0.6146
Height of Tang Projection for Aluminum Wire ± 5%	0.0287	0.7282

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 20

Approximate IEC* Standard Metric Size 0.95
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 19

Cir Mils	1,296.00
Sq Mils	1,017.88
Sq MM	0.65636
Sq Cm	0.0065636
Sq Inches	0.001017360

SWG SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0360	0.9144
Nominal Coated Wire Diameter	0.0386	0.9804
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0437	1.1089
Width of Slot for Machine Insertion	0.0357	0.9068
Length of Cut for Radius Cut	0.1491	3.7865
Depth of Cut for Radius Cut	0.1398	3.5502
Depth of Cut for Non-Radius Cut	0.1241	3.1521
Fusing Electrode Tip Diameter	0.0541	1.3736
Orient Blade Thickness	0.0348	0.8841
Stuffing Blade Thickness	0.0321	0.8161
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.1224	3.1100
Mimumun Tang Width	0.0371	0.9418
Minimum Tang Thickness	0.0353	0.8973
Minimum Tang Radius	0.0219	0.5556
Height of Tang Projection for Aluminum Wire ± 5%	0.0258	0.6554

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 21

Approximate IEC* Standard Metric Size 0.8
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 20

Cir Mils	1,024.00
Sq Mils	804.25
Sq MM	0.51861
Sq Cm	0.0051861
Sq Inches	0.000803840

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0320	0.8128
Nominal Coated Wire Diameter	0.0344	0.8738
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0389	0.9882
Width of Slot for Machine Insertion	0.0317	0.8052
Length of Cut for Radius Cut	0.1329	3.3745
Depth of Cut for Radius Cut	0.1246	3.1639
Depth of Cut for Non-Radius Cut	0.1106	2.8091
Fusing Electrode Tip Diameter	0.0482	1.2241
Orient Blade Thickness	0.0309	0.7851
Stuffing Blade Thickness	0.0285	0.7247
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.1091	2.7716
Mimumun Tang Width	0.0330	0.8372
Minimum Tang Thickness	0.0314	0.7976
Minimum Tang Radius	0.0195	0.4951
Height of Tang Projection for Aluminum Wire ± 5%	0.0229	0.5825

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 22

Approximate IEC* Standard Metric Size 0.71
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 21

Cir Mils	784.00
Sq Mils	615.75
Sq MM	0.39706
Sq Cm	0.0039706
Sq Inches	0.000615440

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0280	0.7112
Nominal Coated Wire Diameter	0.0303	0.7696
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0343	0.8704
Width of Slot for Machine Insertion	0.0277	0.7036
Length of Cut for Radius Cut	0.1170	2.9723
Depth of Cut for Radius Cut	0.1097	2.7868
Depth of Cut for Non-Radius Cut	0.0974	2.4743
Fusing Electrode Tip Diameter	0.0424	1.0782
Orient Blade Thickness	0.0270	0.6860
Stuffing Blade Thickness	0.0249	0.6332
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0961	2.4412
Mimumun Tang Width	0.0288	0.7325
Minimum Tang Thickness	0.0275	0.6979
Minimum Tang Radius	0.0172	0.4361
Height of Tang Projection for Aluminum Wire ± 5%	0.0201	0.5097

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 23

Approximate IEC* Standard Metric Size 0.6
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 22

Cir Mils	576.00
Sq Mils	452.39
Sq MM	0.29172
Sq Cm	0.0029172
Sq Inches	0.000452160

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0240	0.6096
Nominal Coated Wire Diameter	0.0261	0.6629
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0295	0.7498
Width of Slot for Machine Insertion	0.0237	0.6020
Length of Cut for Radius Cut	0.1008	2.5603
Depth of Cut for Radius Cut	0.0945	2.4005
Depth of Cut for Non-Radius Cut	0.0839	2.1314
Fusing Electrode Tip Diameter	0.0366	0.9288
Orient Blade Thickness	0.0231	0.5869
Stuffing Blade Thickness	0.0213	0.5418
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0828	2.1028
Mimumun Tang Width	0.0247	0.6279
Minimum Tang Thickness	0.0236	0.5982
Minimum Tang Radius	0.0148	0.3757
Height of Tang Projection for Aluminum Wire ± 5%	0.0172	0.4369

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 24

Approximate IEC* Standard Metric Size 0.56
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 23

Cir Mils	484.00
Sq Mils	380.13
Sq MM	0.24512
Sq Cm	0.0024512
Sq Inches	0.000379940

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0220	0.5588
Nominal Coated Wire Diameter	0.0240	0.6096
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0271	0.6895
Width of Slot for Machine Insertion	0.0217	0.5512
Length of Cut for Radius Cut	0.0927	2.3543
Depth of Cut for Radius Cut	0.0869	2.2074
Depth of Cut for Non-Radius Cut	0.0772	1.9599
Fusing Electrode Tip Diameter	0.0336	0.8540
Orient Blade Thickness	0.0212	0.5374
Stuffing Blade Thickness	0.0195	0.4961
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0761	1.9337
Mimumun Tang Width	0.0227	0.5756
Minimum Tang Thickness	0.0216	0.5484
Minimum Tang Radius	0.0136	0.3454
Height of Tang Projection for Aluminum Wire ± 5%	0.0158	0.4005

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number	25	Approximate IEC* Standard Metric Size <small>*International Electrotechnical Commission</small>	0.5	Cir Mils	400.00	SWG SYSTEM
				Sq Mils	314.16	
				Sq MM	0.20258	
				Sq Cm	0.0020258	
				Sq Inches	0.000314000	
Approx. AWG (American Wire Gauge)	24					

	Inches	Millimeters
Nominal Bare Diameter	0.0200	0.5080
Nominal Coated Wire Diameter	0.0220	0.5588
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0249	0.6320
Width of Slot for Machine Insertion	0.0197	0.5004
Length of Cut for Radius Cut	0.0850	2.1581
Depth of Cut for Radius Cut	0.0797	2.0234
Depth of Cut for Non-Radius Cut	0.0707	1.7965
Fusing Electrode Tip Diameter	0.0308	0.7829
Orient Blade Thickness	0.0192	0.4879
Stuffing Blade Thickness	0.0177	0.4503
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0698	1.7725
Mimumun Tang Width	0.0206	0.5232
Minimum Tang Thickness	0.0196	0.4985
Minimum Tang Radius	0.0125	0.3166
Height of Tang Projection for Aluminum Wire ± 5%	0.0143	0.3641

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 26

Approximate IEC* Standard Metric Size 0.45
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 25

Cir Mils	324.00
Sq Mils	254.47
Sq MM	0.16409
Sq Cm	0.0016409
Sq Inches	0.000254340

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0180	0.4572
Nominal Coated Wire Diameter	0.0199	0.5055
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0225	0.5717
Width of Slot for Machine Insertion	0.0177	0.4496
Length of Cut for Radius Cut	0.0769	1.9521
Depth of Cut for Radius Cut	0.0721	1.8303
Depth of Cut for Non-Radius Cut	0.0640	1.6251
Fusing Electrode Tip Diameter	0.0279	0.7081
Orient Blade Thickness	0.0173	0.4383
Stuffing Blade Thickness	0.0159	0.4046
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0631	1.6033
Mimumun Tang Width	0.0185	0.4709
Minimum Tang Thickness	0.0177	0.4487
Minimum Tang Radius	0.0113	0.2864
Height of Tang Projection for Aluminum Wire ± 5%	0.0129	0.3277

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 27

Approximate IEC* Standard Metric Size 0.4
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 26

Cir Mils	268.96
Sq Mils	211.24
Sq MM	0.13621
Sq Cm	0.0013621
Sq Inches	0.000211134

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0164	0.4166
Nominal Coated Wire Diameter	0.0182	0.4623
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0206	0.5228
Width of Slot for Machine Insertion	0.0161	0.4089
Length of Cut for Radius Cut	0.0703	1.7853
Depth of Cut for Radius Cut	0.0659	1.6739
Depth of Cut for Non-Radius Cut	0.0585	1.4862
Fusing Electrode Tip Diameter	0.0255	0.6476
Orient Blade Thickness	0.0157	0.3987
Stuffing Blade Thickness	0.0145	0.3680
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0577	1.4664
Mimumun Tang Width	0.0169	0.4291
Minimum Tang Thickness	0.0161	0.4088
Minimum Tang Radius	0.0103	0.2620
Height of Tang Projection for Aluminum Wire ± 5%	0.0118	0.2985

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 28

Approximate IEC* Standard Metric Size 0.355
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 27

Cir Mils	219.04
Sq Mils	172.03
Sq MM	0.11093
Sq Cm	0.0011093
Sq Inches	0.000171946

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0148	0.3759
Nominal Coated Wire Diameter	0.0164	0.4166
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0185	0.4711
Width of Slot for Machine Insertion	0.0145	0.3683
Length of Cut for Radius Cut	0.0633	1.6088
Depth of Cut for Radius Cut	0.0594	1.5084
Depth of Cut for Non-Radius Cut	0.0527	1.3392
Fusing Electrode Tip Diameter	0.0230	0.5836
Orient Blade Thickness	0.0141	0.3591
Stuffing Blade Thickness	0.0131	0.3315
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0520	1.3213
Mimumun Tang Width	0.0152	0.3872
Minimum Tang Thickness	0.0145	0.3689
Minimum Tang Radius	0.0093	0.2360
Height of Tang Projection for Aluminum Wire ± 5%	0.0106	0.2694

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 29

Approximate IEC* Standard Metric Size 0.355
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 27

Cir Mils	184.96
Sq Mils	145.27
Sq MM	0.09367
Sq Cm	0.0009367
Sq Inches	0.000145194

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0136	0.3454
Nominal Coated Wire Diameter	0.0152	0.3861
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0172	0.4367
Width of Slot for Machine Insertion	0.0133	0.3378
Length of Cut for Radius Cut	0.0587	1.4910
Depth of Cut for Radius Cut	0.0550	1.3980
Depth of Cut for Non-Radius Cut	0.0489	1.2412
Fusing Electrode Tip Diameter	0.0213	0.5409
Orient Blade Thickness	0.0130	0.3294
Stuffing Blade Thickness	0.0120	0.3040
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0482	1.2246
Mimumun Tang Width	0.0140	0.3558
Minimum Tang Thickness	0.0133	0.3390
Minimum Tang Radius	0.0086	0.2188
Height of Tang Projection for Aluminum Wire ± 5%	0.0097	0.2476

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 30

Approximate IEC* Standard Metric Size 0.315
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 28

Cir Mils	153.76
Sq Mils	120.76
Sq MM	0.07787
Sq Cm	0.0007787
Sq Inches	0.000120702

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0124	0.3150
Nominal Coated Wire Diameter	0.0139	0.3531
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0157	0.3993
Width of Slot for Machine Insertion	0.0121	0.3073
Length of Cut for Radius Cut	0.0537	1.3635
Depth of Cut for Radius Cut	0.0503	1.2784
Depth of Cut for Non-Radius Cut	0.0447	1.1351
Fusing Electrode Tip Diameter	0.0195	0.4946
Orient Blade Thickness	0.0118	0.2997
Stuffing Blade Thickness	0.0109	0.2766
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0441	1.1199
Mimumun Tang Width	0.0128	0.3244
Minimum Tang Thickness	0.0122	0.3091
Minimum Tang Radius	0.0079	0.2001
Height of Tang Projection for Aluminum Wire ± 5%	0.0089	0.2257

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 31

Approximate IEC* Standard Metric Size 0.28
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 29

Cir Mils	134.56
Sq Mils	105.68
Sq MM	0.06815
Sq Cm	0.0006815
Sq Inches	0.000105630

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0116	0.2946
Nominal Coated Wire Diameter	0.0130	0.3302
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0147	0.3735
Width of Slot for Machine Insertion	0.0113	0.2870
Length of Cut for Radius Cut	0.0502	1.2752
Depth of Cut for Radius Cut	0.0471	1.1957
Depth of Cut for Non-Radius Cut	0.0418	1.0616
Fusing Electrode Tip Diameter	0.0182	0.4626
Orient Blade Thickness	0.0110	0.2798
Stuffing Blade Thickness	0.0102	0.2583
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0412	1.0474
Mimumun Tang Width	0.0119	0.3035
Minimum Tang Thickness	0.0114	0.2891
Minimum Tang Radius	0.0074	0.1871
Height of Tang Projection for Aluminum Wire ± 5%	0.0083	0.2112

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 32

Approximate IEC* Standard Metric Size 0.28
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 29

Cir Mils	116.64
Sq Mils	91.61
Sq MM	0.05907
Sq Cm	0.0005907
Sq Inches	0.000091562

SWG SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0108	0.2743
Nominal Coated Wire Diameter	0.0122	0.3099
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0138	0.3505
Width of Slot for Machine Insertion	0.0105	0.2667
Length of Cut for Radius Cut	0.0471	1.1968
Depth of Cut for Radius Cut	0.0442	1.1221
Depth of Cut for Non-Radius Cut	0.0392	0.9963
Fusing Electrode Tip Diameter	0.0171	0.4341
Orient Blade Thickness	0.0102	0.2600
Stuffing Blade Thickness	0.0095	0.2400
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0387	0.9829
Mimumun Tang Width	0.0111	0.2825
Minimum Tang Thickness	0.0106	0.2692
Minimum Tang Radius	0.0069	0.1756
Height of Tang Projection for Aluminum Wire ± 5%	0.0077	0.1966

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number **33**

Approximate IEC* Standard Metric Size **0.25**
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) **30**

Cir Mils	100.00
Sq Mils	78.54
Sq MM	0.05065
Sq Cm	0.0005065
Sq Inches	0.000078500

SWG SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0100	0.2540
Nominal Coated Wire Diameter	0.0113	0.2870
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0128	0.3246
Width of Slot for Machine Insertion	0.0097	0.2464
Length of Cut for Radius Cut	0.0436	1.1085
Depth of Cut for Radius Cut	0.0409	1.0393
Depth of Cut for Non-Radius Cut	0.0363	0.9228
Fusing Electrode Tip Diameter	0.0158	0.4021
Orient Blade Thickness	0.0095	0.2402
Stuffing Blade Thickness	0.0087	0.2217
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0358	0.9104
Mimumun Tang Width	0.0103	0.2616
Minimum Tang Thickness	0.0098	0.2493
Minimum Tang Radius	0.0064	0.1626
Height of Tang Projection for Aluminum Wire ± 5%	0.0072	0.1820

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 34

Approximate IEC* Standard Metric Size 0.224
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 31

Cir Mils	84.64
Sq Mils	66.48
Sq MM	0.04287
Sq Cm	0.0004287
Sq Inches	0.000066442

SWG SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0092	0.2337
Nominal Coated Wire Diameter	0.0104	0.2642
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0118	0.2988
Width of Slot for Machine Insertion	0.0089	0.2261
Length of Cut for Radius Cut	0.0402	1.0202
Depth of Cut for Radius Cut	0.0377	0.9565
Depth of Cut for Non-Radius Cut	0.0334	0.8493
Fusing Electrode Tip Diameter	0.0146	0.3701
Orient Blade Thickness	0.0087	0.2204
Stuffing Blade Thickness	0.0080	0.2035
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0330	0.8379
Mimumun Tang Width	0.0095	0.2407
Minimum Tang Thickness	0.0090	0.2293
Minimum Tang Radius	0.0059	0.1497
Height of Tang Projection for Aluminum Wire ± 5%	0.0066	0.1675

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number **35**

Approximate IEC* Standard Metric Size **0.2**
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) **32**

Cir Mils	70.56
Sq Mils	55.42
Sq MM	0.03574
Sq Cm	0.0003574
Sq Inches	0.000055390

SWG SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0084	0.2134
Nominal Coated Wire Diameter	0.0096	0.2438
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0109	0.2758
Width of Slot for Machine Insertion	0.0081	0.2057
Length of Cut for Radius Cut	0.0371	0.9417
Depth of Cut for Radius Cut	0.0348	0.8829
Depth of Cut for Non-Radius Cut	0.0309	0.7839
Fusing Electrode Tip Diameter	0.0134	0.3416
Orient Blade Thickness	0.0079	0.2006
Stuffing Blade Thickness	0.0073	0.1852
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0305	0.7735
Mimumun Tang Width	0.0087	0.2198
Minimum Tang Thickness	0.0082	0.2094
Minimum Tang Radius	0.0054	0.1382
Height of Tang Projection for Aluminum Wire ± 5%	0.0060	0.1529

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 36

Approximate IEC* Standard Metric Size 0.18
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 32

Cir Mils	57.76
Sq Mils	45.36
Sq MM	0.02925
Sq Cm	0.0002925
Sq Inches	0.000045342

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0076	0.1930
Nominal Coated Wire Diameter	0.0087	0.2210
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0098	0.2499
Width of Slot for Machine Insertion	0.0000	0.0000
Length of Cut for Radius Cut	0.0336	0.8534
Depth of Cut for Radius Cut	0.0315	0.8002
Depth of Cut for Non-Radius Cut	0.0280	0.7105
Fusing Electrode Tip Diameter	0.0122	0.3096
Orient Blade Thickness	0.0000	0.0000
Stuffing Blade Thickness	0.0000	0.0000
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0276	0.7009
Mimumun Tang Width	0.0078	0.1988
Minimum Tang Thickness	0.0075	0.1894
Minimum Tang Radius	0.0049	0.1252
Height of Tang Projection for Aluminum Wire ± 5%	0.0054	0.1384

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 37

Approximate IEC* Standard Metric Size 0.18
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 33

Cir Mils	46.24
Sq Mils	36.32
Sq MM	0.02342
Sq Cm	0.0002342
Sq Inches	0.000036298

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0068	0.1727
Nominal Coated Wire Diameter	0.0079	0.2007
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0089	0.2269
Width of Slot for Machine Insertion	0.0000	0.0000
Length of Cut for Radius Cut	0.0305	0.7749
Depth of Cut for Radius Cut	0.0286	0.7266
Depth of Cut for Non-Radius Cut	0.0254	0.6451
Fusing Electrode Tip Diameter	0.0111	0.2811
Orient Blade Thickness	0.0000	0.0000
Stuffing Blade Thickness	0.0000	0.0000
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0251	0.6365
Mimumun Tang Width	0.0070	0.1779
Minimum Tang Thickness	0.0067	0.1695
Minimum Tang Radius	0.0045	0.1137
Height of Tang Projection for Aluminum Wire ± 5%	0.0049	0.1238

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 38

Approximate IEC* Standard Metric Size 0.16
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 34

Cir Mils	36.00
Sq Mils	28.27
Sq MM	0.01823
Sq Cm	0.0001823
Sq Inches	0.000028260

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0060	0.1524
Nominal Coated Wire Diameter	0.0069	0.1753
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0078	0.1982
Width of Slot for Machine Insertion	0.0000	0.0000
Length of Cut for Radius Cut	0.0266	0.6769
Depth of Cut for Radius Cut	0.0250	0.6346
Depth of Cut for Non-Radius Cut	0.0222	0.5635
Fusing Electrode Tip Diameter	0.0097	0.2455
Orient Blade Thickness	0.0000	0.0000
Stuffing Blade Thickness	0.0000	0.0000
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0219	0.5559
Mimumun Tang Width	0.0062	0.1570
Minimum Tang Thickness	0.0059	0.1496
Minimum Tang Radius	0.0039	0.0993
Height of Tang Projection for Aluminum Wire ± 5%	0.0043	0.1092

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 39

Approximate IEC* Standard Metric Size 0.125
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 36

Cir Mils	27.04
Sq Mils	21.24
Sq MM	0.01369
Sq Cm	0.0001369
Sq Inches	0.000021226

SWG SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0052	0.1321
Nominal Coated Wire Diameter	0.0061	0.1549
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0069	0.1752
Width of Slot for Machine Insertion	0.0000	0.0000
Length of Cut for Radius Cut	0.0236	0.5984
Depth of Cut for Radius Cut	0.0221	0.5610
Depth of Cut for Non-Radius Cut	0.0196	0.4981
Fusing Electrode Tip Diameter	0.0085	0.2171
Orient Blade Thickness	0.0000	0.0000
Stuffing Blade Thickness	0.0000	0.0000
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0193	0.4915
Mimumun Tang Width	0.0054	0.1360
Minimum Tang Thickness	0.0051	0.1296
Minimum Tang Radius	0.0035	0.0878
Height of Tang Projection for Aluminum Wire ± 5%	0.0037	0.0947

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number **40**

Approximate IEC* Standard Metric Size **0.125**
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) **36**

Cir Mils	23.04
Sq Mils	18.10
Sq MM	0.01167
Sq Cm	0.0001167
Sq Inches	0.000018086

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0048	0.1219
Nominal Coated Wire Diameter	0.0056	0.1422
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0063	0.1609
Width of Slot for Machine Insertion	0.0000	0.0000
Length of Cut for Radius Cut	0.0216	0.5493
Depth of Cut for Radius Cut	0.0203	0.5151
Depth of Cut for Non-Radius Cut	0.0180	0.4573
Fusing Electrode Tip Diameter	0.0078	0.1993
Orient Blade Thickness	0.0000	0.0000
Stuffing Blade Thickness	0.0000	0.0000
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0178	0.4512
Mimumun Tang Width	0.0049	0.1256
Minimum Tang Thickness	0.0047	0.1196
Minimum Tang Radius	0.0032	0.0806
Height of Tang Projection for Aluminum Wire ± 5%	0.0034	0.0874

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 41

Approximate IEC* Standard Metric Size 0.112
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 37

Cir Mils	19.36
Sq Mils	15.21
Sq MM	0.00980
Sq Cm	0.0000980
Sq Inches	0.000015198

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0044	0.1118
Nominal Coated Wire Diameter	0.0044	0.1118
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0050	0.1264
Width of Slot for Machine Insertion	0.0000	0.0000
Length of Cut for Radius Cut	0.0170	0.4316
Depth of Cut for Radius Cut	0.0159	0.4047
Depth of Cut for Non-Radius Cut	0.0141	0.3593
Fusing Electrode Tip Diameter	0.0062	0.1566
Orient Blade Thickness	0.0000	0.0000
Stuffing Blade Thickness	0.0000	0.0000
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0140	0.3545
Mimumun Tang Width	0.0045	0.1151
Minimum Tang Thickness	0.0043	0.1097
Minimum Tang Radius	0.0025	0.0633
Height of Tang Projection for Aluminum Wire ± 5%	0.0032	0.0801

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number	42	Cir Mils	16.00	SWG SYSTEM
Approximate IEC* Standard Metric Size	0.1	Sq Mils	12.57	
<small>*International Electrotechnical Commission</small>		Sq MM	0.00810	
Approx. AWG (American Wire Gauge)	38	Sq Cm	0.0000810	
		Sq Inches	0.000012560	

	Inches	Millimeters
Nominal Bare Diameter	0.0040	0.1016
Nominal Coated Wire Diameter	0.0047	0.1194
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0053	0.1350
Width of Slot for Machine Insertion	0.0000	0.0000
Length of Cut for Radius Cut	0.0182	0.4610
Depth of Cut for Radius Cut	0.0170	0.4323
Depth of Cut for Non-Radius Cut	0.0151	0.3838
Fusing Electrode Tip Diameter	0.0066	0.1672
Orient Blade Thickness	0.0000	0.0000
Stuffing Blade Thickness	0.0000	0.0000
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0149	0.3787
Mimumun Tang Width	0.0041	0.1046
Minimum Tang Thickness	0.0039	0.0997
Minimum Tang Radius	0.0027	0.0676
Height of Tang Projection for Aluminum Wire ± 5%	0.0029	0.0728

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 43

Approximate IEC* Standard Metric Size 0.09
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 39

Cir Mils	12.96
Sq Mils	10.18
Sq MM	0.00656
Sq Cm	0.0000656
Sq Inches	0.000010174

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0036	0.0914
Nominal Coated Wire Diameter	0.0042	0.1067
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0048	0.1207
Width of Slot for Machine Insertion	0.0000	0.0000
Length of Cut for Radius Cut	0.0162	0.4120
Depth of Cut for Radius Cut	0.0152	0.3863
Depth of Cut for Non-Radius Cut	0.0135	0.3430
Fusing Electrode Tip Diameter	0.0059	0.1495
Orient Blade Thickness	0.0000	0.0000
Stuffing Blade Thickness	0.0000	0.0000
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0133	0.3384
Mimumun Tang Width	0.0037	0.0942
Minimum Tang Thickness	0.0035	0.0897
Minimum Tang Radius	0.0024	0.0605
Height of Tang Projection for Aluminum Wire ± 5%	0.0026	0.0655

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 44

Approximate IEC* Standard Metric Size 0.08
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 40

Cir Mils	10.24
Sq Mils	8.04
Sq MM	0.00519
Sq Cm	0.0000519
Sq Inches	0.000008038

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0032	0.0813
Nominal Coated Wire Diameter	0.0038	0.0965
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0043	0.1092
Width of Slot for Machine Insertion	0.0000	0.0000
Length of Cut for Radius Cut	0.0147	0.3728
Depth of Cut for Radius Cut	0.0138	0.3495
Depth of Cut for Non-Radius Cut	0.0122	0.3103
Fusing Electrode Tip Diameter	0.0053	0.1352
Orient Blade Thickness	0.0000	0.0000
Stuffing Blade Thickness	0.0000	0.0000
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0121	0.3062
Mimumun Tang Width	0.0033	0.0837
Minimum Tang Thickness	0.0031	0.0798
Minimum Tang Radius	0.0022	0.0547
Height of Tang Projection for Aluminum Wire ± 5%	0.0023	0.0583

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 45

Approximate IEC* Standard Metric Size 0.071
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 41

Cir Mils	7.84
Sq Mils	6.16
Sq MM	0.00397
Sq Cm	0.0000397
Sq Inches	0.000006154

SWG SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0028	0.0711
Nominal Coated Wire Diameter	0.0033	0.0838
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0037	0.0948
Width of Slot for Machine Insertion	0.0000	0.0000
Length of Cut for Radius Cut	0.0127	0.3237
Depth of Cut for Radius Cut	0.0119	0.3035
Depth of Cut for Non-Radius Cut	0.0106	0.2695
Fusing Electrode Tip Diameter	0.0046	0.1174
Orient Blade Thickness	0.0000	0.0000
Stuffing Blade Thickness	0.0000	0.0000
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0105	0.2659
Mimumun Tang Width	0.0029	0.0733
Minimum Tang Thickness	0.0027	0.0698
Minimum Tang Radius	0.0019	0.0475
Height of Tang Projection for Aluminum Wire ± 5%	0.0020	0.0510

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 46

Approximate IEC* Standard Metric Size 0.063
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 42

Cir Mils	5.76
Sq Mils	4.52
Sq MM	0.00292
Sq Cm	0.0000292
Sq Inches	0.000004522

SWG SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0024	0.0610
Nominal Coated Wire Diameter	0.0029	0.0737
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0033	0.0833
Width of Slot for Machine Insertion	0.0000	0.0000
Length of Cut for Radius Cut	0.0112	0.2845
Depth of Cut for Radius Cut	0.0105	0.2667
Depth of Cut for Non-Radius Cut	0.0093	0.2368
Fusing Electrode Tip Diameter	0.0041	0.1032
Orient Blade Thickness	0.0000	0.0000
Stuffing Blade Thickness	0.0000	0.0000
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0092	0.2336
Mimumun Tang Width	0.0025	0.0628
Minimum Tang Thickness	0.0024	0.0598
Minimum Tang Radius	0.0016	0.0417
Height of Tang Projection for Aluminum Wire ± 5%	0.0017	0.0437

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.

FUSING CHART FOR COMMUTATOR SLOT AND TANG TERMINAL DIMENSIONS

SWG Number 47

Approximate IEC* Standard Metric Size 0.05
*International Electrotechnical Commission

Approx. AWG (American Wire Gauge) 44

Cir Mils	4.00
Sq Mils	3.14
Sq MM	0.00203
Sq Cm	0.0000203
Sq Inches	0.000003140

SWG
SYSTEM

	Inches	Millimeters
Nominal Bare Diameter	0.0020	0.0508
Nominal Coated Wire Diameter	0.0020	0.0508
Commutator Slot Dimensions		
The saw diameter for which this chart was calculated is 7/8 Inch (0.875 Inch - 22.22 MM)		
Width of Slot for Manual Insertion	0.0023	0.0575
Width of Slot for Machine Insertion	0.0000	0.0000
Length of Cut for Radius Cut	0.0077	0.1962
Depth of Cut for Radius Cut	0.0072	0.1839
Depth of Cut for Non-Radius Cut	0.0064	0.1633
Fusing Electrode Tip Diameter	0.0028	0.0712
Orient Blade Thickness	0.0000	0.0000
Stuffing Blade Thickness	0.0000	0.0000
Tang Terminal Dimensions		
Minimum Tang Length from the Tang's End to the Start of the Tang's Radius	0.0063	0.1611
Mimumun Tang Width	0.0021	0.0523
Minimum Tang Thickness	0.0020	0.0499
Minimum Tang Radius	0.0011	0.0288
Height of Tang Projection for Aluminum Wire ± 5%	0.0014	0.0364

The dimensions are usable only to three (3) decimal places for inch measurements and two (2) decimal places for metric measurements.