

DR. CH. 1 2 3 4

5 6 7 8

B.A. SCREW THREADS

STANDARDS LIST No 1



PITCH P = $\frac{\text{THREADS PER INCH}}{1}$
 DEPTH OF THREAD D = $0.6P$
 RADIUS R = $0.182P$

BA No	DIAMETER		CORE DIA.	No OF T. P. I.	PITCH		CLEARANCE DIA.	No OF DRILL	TAPPING DRILL	
	INCHES	M/M			INCHES	M/M			DIA.	No
0	.2362	6.0	.189"	25.4	.0394	1.00	.242"	C	.196"	9
1	.2087	5.3	.1662"	28.2	.0354	.90	.213"	3	.173"	17
2	.185	4.7	.1469"	31.4	.0319	.81	.1935"	10	.152"	24
3	.1614	4.1	.1268"	34.8	.0287	.73	.1695"	18	.128"	30
4	.1417	3.6	.1105"	38.5	.0260	.66	.1495"	25	.116"	32
5	.126	3.2	.098"	43.0	.0232	.59	.136"	29	.104"	37
6	.1102	2.8	.085"	47.9	.0209	.53	.120"	31	.089"	43
7	.0984	2.5	.0757"	52.9	.0189	.48	.1065"	36	.081"	46
8	.0866	2.2	.0663"	59.1	.0169	.43	.0935"	42	.070"	50
9	.0748	1.9	.0563"	65.1	.0154	.39	.081"	46	.0595"	53
10	.0669	1.7	.0504"	72.6	.0138	.35	.073"	49	.055"	54
11	.0591	1.5	.0445"	81.9	.0122	.31	.0635"	52	.0465"	56
12	.0511	1.3	.0379"	90.9	.0110	.28	.055"	54	.041"	59
13	.0472	1.2	.0354"	102.0	.0098	.25	.052"	55	.038"	63
14	.0394	1.0	.0284"	109.9	.0091	.23	.042"	58	.031"	68

FOR GENERAL COMMERCIAL WORK THE SIZES GIVEN IN THE CLEARANCE COLUMN ARE TO BE FOLLOWED. DEPARTURES MAY BE MADE WHEN SPECIAL FITTING IS REQUIRED.

B. S. I. REPORT No 93

S. SMITH & SONS (MOTOR ACCESSORIES) LTD. CHELTENHAM.

DR.

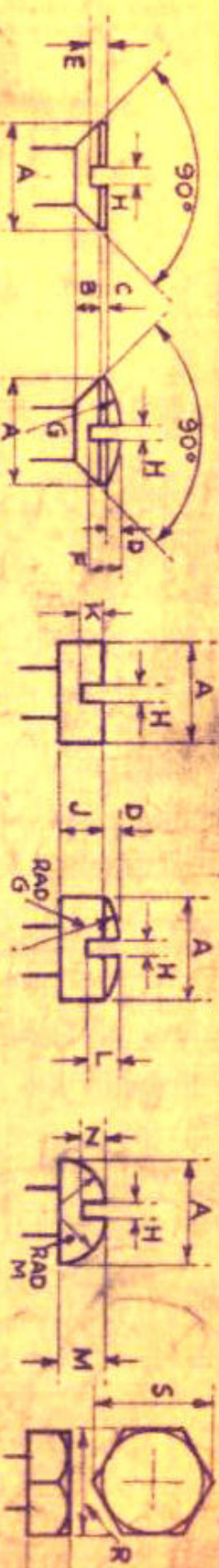
CH. *W*

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2		6
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4		8

B.A. SCREW HEADS

STANDARDS LIST

No 2



BA No	COUNTERSUNK.					CHEESE.					FILISTER.					ROUND.					HEXAGON.				
	A	Limit on A	B	C	D	E	F	G	H	J	K	L	M	N	R	S									
0	.413"	-.008"	.089"	.016"	.047"	.052"	.076"	.472"	.048"	.177"	.089"	.112"	.189"	.094"	.413"										
1	.365"	-.008"	.078"	.014"	.042"	.047"	.068"	.417"	.048"	.156"	.078"	.099"	.167"	.083"	.365"										
2	.324"	-.008"	.069"	.013"	.037"	.043"	.061"	.370"	.040"	.139"	.069"	.088"	.148"	.074"	.324"										
3	.282"	-.006"	.061"	.012"	.032"	.036"	.052"	.323"	.040"	.121"	.061"	.077"	.129"	.065"	.282"										
4	.248"	-.006"	.053"	.011"	.028"	.032"	.047"	.283"	.032"	.106"	.053"	.067"	.113"	.057"	.248"										
5	.220"	-.006"	.047"	.010"	.025"	.030"	.042"	.252"	.032"	.094"	.047"	.060"	.101"	.050"	.220"										
6	.193"	-.006"	.041"	.009"	.022"	.025"	.036"	.220"	.024"	.083"	.041"	.052"	.088"	.044"	.193"										
7	.172"	-.005"	.037"	.009"	.020"	.022"	.032"	.197"	.024"	.074"	.037"	.047"	.079"	.039"	.172"										
8	.152"	-.005"	.032"	.008"	.017"	.020"	.029"	.173"	.024"	.065"	.032"	.041"	.069"	.035"	.152"										
9	.131"	-.004"	.028"	.008"	.015"	.018"	.025"	.150"	.018"	.056"	.028"	.036"	.060"	.030"	.131"										
10	.117"	-.004"	.025"	.007"	.013"	.016"	.023"	.134"	.018"	.050"	.025"	.032"	.054"	.027"	.117"										
11	.103"	-.004"	.022"	.007"	.012"	.015"	.021"	.118"	.018"	.044"	.022"	.028"	.047"	.024"	.103"										
12	.090"	-.004"	.019"	.006"	.010"	.014"	.019"	.102"	.0124"	.038"	.019"	.024"	.041"	.020"	.090"										
13	.083"	-.003"	.018"	.006"	.009"	.013"	.018"	.094"	.0124"	.035"	.018"	.022"	.038"	.019"	.083"										
14	.069"	-.003"	.015"	.006"	.008"	.011"	.015"	.079"	.0124"	.030"	.015"	.019"	.031"	.016"	.069"										
15	.061"	-.003"	.013"	.006"	.007"	.007"	.010"	.070"	.0116"	.026"	.013"	.017"	.028"	.014"	.061"										

B.S.I. REPORT No 87

S. SMITH & SONS (MOTOR ACCESSORIES) LTD. CHELTENHAM.

DR.

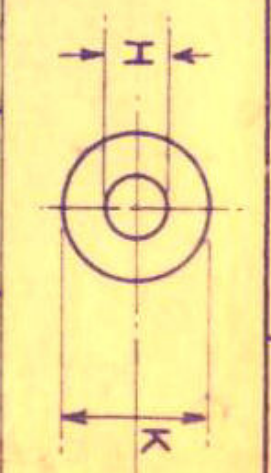
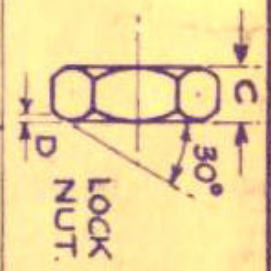
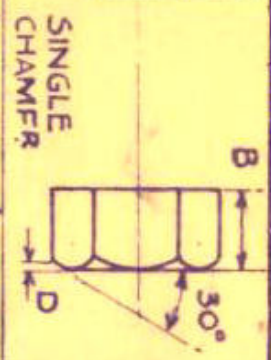
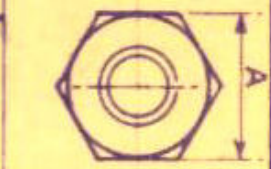
CH. No.

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2	6
3	7
4	8

B.A. NUTS & WASHERS.

STANDARDS LIST

No 3



B.A. No	A		B	C	D	H	J	K		
	MAX.	MIN.						SMALL	MEDIUM	LARGE
0	.413"	.410"	.236"	.142"	.021"	.245"	.040"	.490"	.613"	.735"
1	.365"	.362"	.209"	.125"	.018"	.217"	.036"	.434"	.542"	.651"
2	.324"	.321"	.185"	.111"	.017"	.193"	.036"	.386"	.483"	.579"
3	.282"	.279"	.161"	.096"	.014"	.168"	.032"	.336"	.420"	.504"
4	.248"	.245"	.142"	.085"	.012"	.148"	.032"	.296"	.370"	.444"
5	.220"	.217"	.126"	.076"	.011"	.131"	.028"	.262"	.328"	.393"
6	.193"	.190"	.110"	.066"	.009"	.115"	.024"	.230"	.287"	.345"
7	.172"	.170"	.098"	.059"	.008"	.102"	.024"	.204"	.255"	.306"
8	.152"	.150"	.087"	.052"	.008"	.090"	.022"	.180"	.225"	.270"
9	.131"	.129"	.075"	.045"	.007"	.078"	.020"	.156"	.195"	.234"
10	.117"	.115"	.067"	.040"	.007"	.070"	.018"	.140"	.175"	.210"
11	.103"	.101"	.059"	.035"	.006"					
12	.090"	.088"	.051"	.031"	.006"					
13	.083"	.081"	.047"	.028"	.004"					
14	.069"	.067"	.039"	.023"	.004"					
15	.061"	.059"	.035"	.021"	.003"					

S. SMITH & SONS (MOTOR ACCESSORIES) LTD. CHELTENHAM.

DR.	1	MODIFIED *	5
	2	12 - 6 - 44	6
CH.	3		7
	4		8

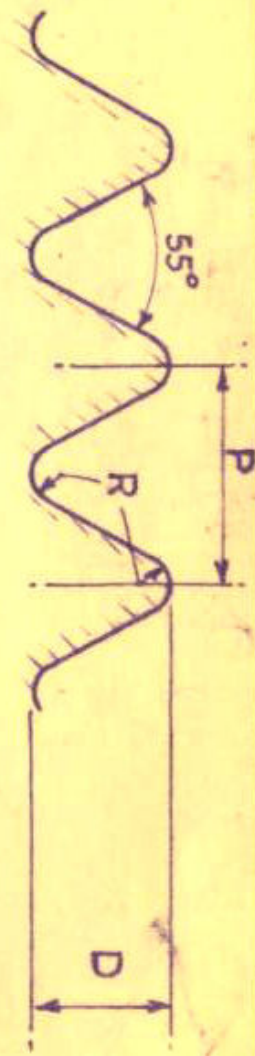
WHITWORTH THREADS

STANDARDS LIST
No 4

$$\text{PITCH } P = \frac{1}{\text{No OF T.P.I.}}$$

$$\text{DEPTH } D = 0.6403 P$$

$$\text{RADIUS } R = 0.1373 P$$



* FOR TOOL
& GENERAL
COMMERCIAL WORK

NOMINAL DIA	No OF T.P.I.	PITCH P	DEPTH D	FULL DIAMETER		EFFECTIVE DIA.		CORE DIA.		TAPPING DRILL *
				BOLT	NUT	BOLT	NUT	BOLT	NUT	
3/16"	24	.0417"	.0267"	.1875"	.1895"	.1608"	.1628"	.1341"	.1361"	28
1/4"	20	.0500"	.0320"	.2500"	.2520"	.2180"	.2200"	.1860"	.1880"	9
5/16"	18	.0556"	.0355"	.3125"	.3145"	.2769"	.2789"	.2414"	.2434"	1/4"
3/8"	16	.0625"	.0400"	.3750"	.3770"	.3350"	.3370"	.2950"	.2970"	5/16"
7/16"	14	.0714"	.0457"	.4375"	.4395"	.3918"	.3938"	.3460"	.3480"	23/64"
1/2"	12	.0833"	.0533"	.5000"	.5020"	.4466"	.4486"	.3933"	.3953"	13/32"
9/16"	12	.0833"	.0533"	.5625"	.5645"	.5091"	.5111"	.4558"	.4578"	15/32"
5/8"	11	.0909"	.0582"	.6250"	.6270"	.5668"	.5688"	.5086"	.5106"	17/32"
11/16"	11	.0909"	.0582"	.6875"	.6895"	.6293"	.6313"	.5711"	.5731"	37/64"
3/4"	10	.1000"	.0640"	.7500"	.7520"	.6860"	.6880"	.6219"	.6239"	41/64"
13/16"	10	.1000"	.0640"	.8125"	.8145"	.7485"	.7505"	.6844"	.6864"	45/64"
7/8"	9	.1111"	.0711"	.8750"	.8770"	.8039"	.8059"	.7327"	.7347"	3/4"
1"	8	.1250"	.0800"	1.000"	1.002"	.9200"	.9220"	.8399"	.8419"	55/64"

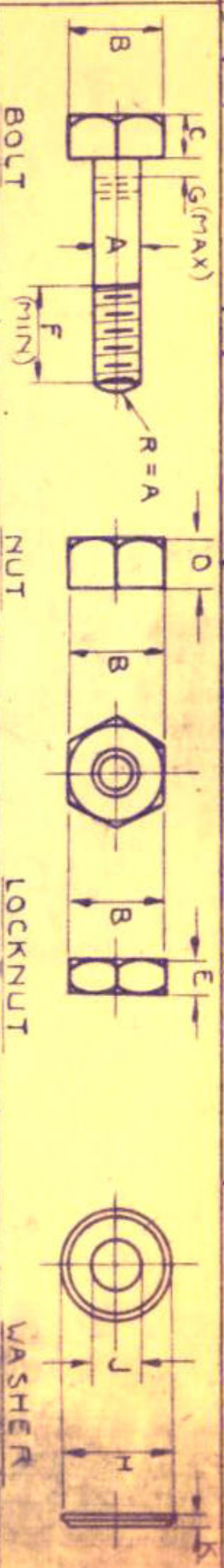
DR. TR E R

CH. A P P L I C A T I O N

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WHITWORTH BOLTS
NUTS & WASHERS

STANDARD LIST
NO 5



	BOLT			NUT			LOCKNUT			WASHER		
A	B	C	D	E	F (BOLT)	G (SET SCREWS)	H	J	K			
3/16"	.187"	H.445" L.440"	H.190" L.180"	H.200" L.190"	H.133" L.123"	.375"	H.500" L.495"	H.208" L.203"	H.208" L.203"			
1/4"	.250"	H.525" L.520"	H.220" L.210"	H.250" L.240"	H.166" L.156"	.500"	H.625" L.620"	H.270" L.265"	H.270" L.265"			
5/16"	.312"	H.600" L.595"	H.270" L.260"	H.312" L.302"	H.208" L.198"	.625"	H.750" L.745"	H.333" L.328"	H.333" L.328"			
3/8"	.375"	H.710" L.705"	H.330" L.320"	H.375" L.365"	H.250" L.240"	.750"	H.875" L.870"	H.395" L.390"	H.395" L.390"			
7/16"	.437"	H.820" L.815"	H.380" L.370"	H.437" L.427"	H.291" L.281"	.875"	H.1000" L.995"	H.458" L.453"	H.458" L.453"			
1/2"	.500"	H.920" L.915"	H.440" L.430"	H.500" L.490"	H.333" L.323"	1.000"	H.1125" L.1120"	H.520" L.515"	H.520" L.515"			
9/16"	.562"	H.1010" L.1002"	H.490" L.480"	H.562" L.552"	H.375" L.365"	1.125"	H.1250" L.1240"	H.593" L.588"	H.593" L.588"			
5/8"	.625"	H.1100" L.1092"	H.550" L.540"	H.625" L.615"	H.416" L.406"	1.250"	H.1375" L.1365"	H.656" L.651"	H.656" L.651"			
11/16"	.687"	H.1200" L.1192"	H.600" L.590"	H.687" L.677"	H.458" L.448"	1.375"	H.1500" L.1490"	H.718" L.713"	H.718" L.713"			
3/4"	.750"	H.1300" L.1292"	H.660" L.650"	H.750" L.740"	H.500" L.490"	1.500"	H.1625" L.1615"	H.781" L.776"	H.781" L.776"			
7/8"	.875"	H.1480" L.1468"	H.770" L.760"	H.875" L.865"	H.583" L.573"	1.750"	H.1875" L.1865"	H.906" L.901"	H.906" L.901"			
1"	1.000"	H.1670" L.1658"	H.880" L.870"	H.1000" L.990"	H.666" L.656"	2.000"	H.2125" L.2115"	H.1031" L.1026"	H.1031" L.1026"			

B. S. I. REPORT
No 190

S. SMITH & SONS (MOTOR ACCESSORIES) LTD CHELTENHAM

DR.	TR. E.R.	1	5
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CH.	AP	3	7
		4	8

WOODSCREWS
SIZES & STOCK LENGTHS.

STANDARD LIST
No 6

No	APPROX. BODY DIA	APPROX. HEAD DIA	CLEARANCE DRILL		TAPPING DRILL		THRS PER 1"	STOCK LENGTHS	
			SIZE	No	SIZE	No		CSK. HEAD IRON & BRASS	RD HEAD IRON & BRASS.
1	.071"	.142"	.078"	47	.052"	55	28	1/4" + 1/8" TO 5/8"	3/16" 1/4" + 1/8" TO 1/2"
2	.084"	.168"	.093"	42	.050"	53	26	1/4" + 1/8" TO 3/8"	1/4" + 1/8" TO 1/2"
3	.097"	.194"	.106"	36	.073"	49	24	1/4" + 1/8" TO 1"	1/4" + 1/8" TO 5/8"
4	.110"	.220"	.120"	31	.086"	44	22	1/4" + 1/8" TO 1"	3/8" + 1/8" TO 1"
5	.124"	.248"	.136"	29	.099"	39	20	1/4" + 1/8" TO 1" 1/4"	3/8" + 1/8" TO 1"
6	.137"	.274"	.152"	24	.110"	35	18	1/4" + 1/8" TO 1" 1/4" TO 1 1/2"	1/2" + 1/8" TO 1"
7	.150"	.300"	.166"	19	.125"	28	16	3/8" + 1/8" TO 1" 1/4" TO 1 3/4"	1/2" + 1/8" TO 1" 1/4" TO 1 1/2"
8	.163"	.326"	.180"	15	.136"	29	15	3/8" + 1/8" TO 1" 1/4" TO 2"	1/2" + 1/8" TO 1" 1/4" TO 2"
9	.176"	.352"	.193"	10	.147"	26	14	1/2" + 1/8" TO 1" 1/4" TO 2 1/4"	1/2" + 1/8" TO 1" 1/4" TO 2"
10	.189"	.378"	.209"	4	.157"	22	13	1/2" + 1/8" TO 1" 1/4" TO 2 1/2"	1/2" + 1/8" TO 1" 1/4" TO 2 1/2"
12	.216"	.432"	.238"	8	.182"	14	11	1/2" + 1/8" TO 1" 1/4" TO 3"	1/2" + 1/8" TO 1" 1/4" TO 3"
14	.242"	.484"	.266"	H	.201"	7	10	5/8" + 1/8" TO 1" 1/4" TO 4"	1/2" + 1/8" TO 1" 1/4" TO 4"

FOR SCREWS WITH LESS THREAD PROJECTING IN WOOD THAN 1/4" OR FOR ANY SCREWS IN SOFT WOOD, IT IS ADVISABLE TO USE THE TAPPING DRILL QUOTED FOR THE NEXT SIZE SMALLER SCREW

S. SMITH & SONS (MOTOR ACCESSORIES) LTD CHELTENHAM

DR.

CH.

P

STD. DRILL SIZES.

UP TO 1/2" DIA.

STANDARDS LIST

No 7

No	DIA	No	DIA	No	DIA	No	DIA	No	DIA	No	DIA	No	DIA	No	DIA
80	.0135"	64	.036"	48	.076"	33	.113"	18	.1695"	3	.213"	9/32"	.2612"	W	.386"
79	.0145"	63	.037"	5/64"	.0781"	32	.116"	11/64"	.1719"	7/32"	.2187"	L	.290"	25/64"	.3906"
1/4"	.0156"	62	.038"	47	.0785"	31	.120"	17	.173"	2	.221"	M	.295"	X	.397"
78	.016"	61	.039"	46	.081"	1/8"	.125"	16	.177"	1	.228"	19/64"	.2969"	Y	.404"
77	.018"	60	.040"	45	.082"	30	.1285"	15	.180"	A	.234"	N	.302"	13/32"	.4062"
76	.020"	59	.041"	44	.086"	29	.136"	14	.182"	15/64"	.2344"	5/16"	.3125"	Z	.413"
75	.021"	58	.042"	43	.089"	28	.1405"	13	.185"	B	.238"	O	.316"	27/64"	.4219"
74	.0225"	57	.043"	42	.0935"	9/64"	.1406"	3/16"	.1875"	C	.242"	P	.323"	7/16"	.4375"
73	.024"	56	.0465"	3/32"	.0937"	27	.144"	12	.189"	D	.246"	21/64"	.3281"	29/64"	.4531"
72	.025"	55	.0469"	41	.096"	26	.147"	11	.191"	E	.250"	Q	.332"	15/32"	.4687"
71	.026"	55	.052"	40	.098"	25	.1495"	10	.1935"	1/4"	.250"	R	.339"	31/64"	.4844"
70	.028"	54	.055"	39	.0995"	24	.152"	9	.196"	F	.257"	11/32"	.3437"	1/2"	.500"
69	.0292"	53	.0595"	38	.1015"	23	.154"	8	.199"	G	.261"	S	.348"		
68	.031"	1/16"	.0625"	37	.104"	5/32"	.1562"	7	.201"	7/64"	.2656"	T	.358"		
1/32"	.0312"	52	.0635"	36	.1065"	22	.157"	13/64"	.2031"	H	.266"	23/64"	.3594"		
67	.032"	51	.067"	7/64"	.1094"	21	.159"	6	.204"	I	.272"	U	.368"		
66	.033"	50	.070"	35	.110"	20	.161"	5	.2055"	J	.277"	3/8"	.375"		
65	.035"	49	.073"	34	.111"	19	.166"	4	.209"	K	.281"	V	.377"		

SMITH & SONS (MOTOR ACCESSORIES) LTD. CHELTENHAM.

DR. TR. E.R.

1		5
2		6
3		7
4		8

BRITISH IMPERIAL WIRE

STANDARD LIST.

CH. AP. No.

1		5
2		6
3		7
4		8

GAUGE EQUIVALENTS

NO 8

GAUGE	INCH	M/M.	GAUGE	INCH	M/M.	GAUGE	INCH	M/M.	GAUGE	INCH	M/M.
000000	.464"	11.78	9	.144"	3.66	23	.024"	.61	37	.0068"	.17
000000	.432"	10.97	10	.128"	3.25	24	.022"	.56	38	.0060"	.15
00000	.400"	10.16	11	.116"	2.95	25	.020"	.51	39	.0052"	.13
000	.372"	9.45	12	.104"	2.64	26	.018"	.46	40	.0048"	.12
00	.348"	8.84	13	.092"	2.34	27	.0164"	.42	41	.0044"	.11
0	.324"	8.23	14	.080"	2.03	28	.0148"	.38	42	.0040"	.10
1	.300"	7.62	15	.072"	1.83	29	.0136"	.35	43	.0036"	.09
2	.276"	7.01	16	.064"	1.63	30	.0124"	.31	44	.0032"	.08
3	.252"	6.40	17	.056"	1.42	31	.0116"	.29	45	.0028"	.07
4	.232"	5.89	18	.048"	1.22	32	.0108"	.27	46	.0024"	.06
5	.212"	5.38	19	.040"	1.02	33	.0100"	.25	47	.0020"	.05
6	.192"	4.88	20	.036"	.91	34	.0092"	.23	48	.0016"	.04
7	.176"	4.47	21	.032"	.81	35	.0084"	.21	49	.0012"	.03
8	.160"	4.06	22	.028"	.71	36	.0076"	.19	50	.0010"	.025

S. SMITH & SONS (MOTOR ACCESSORIES) LTD. CHELTENHAM.

DR.	1	5
	2	6
	3	7
CH.	4	8

FORMULAE FOR STANDARDS LIST
 WEIGHT OF RAW MATERIAL. No 9

1. WEIGHT PER SQ. FT. OF SHEET.
 = WEIGHT PER CU. FT. X THICKNESS (INCHES)
 12
 OR SPECIFIC GRAVITY X 5.2 X THICKNESS (INCHES)

2. WEIGHT OF ROUND ROD PER FT.
 = DIA² X .7854 X 12 X WT. PER CU. IN.

M. STL.	D ² X 2.667	LEAD	D ² X 3.870
BRASS	D ² X 2.827	ALUM ^N	D ² X 0.904
COPPER	D ² X 2.993	DURAL.	D ² X 0.943
IRON	D ² X 2.610	MAGN ^M ALLOY	D ² X 0.602
NICKEL	D ² X 2.990		

3. WEIGHT OF HEXAGON ROD PER FT.
 = WIDTH ACROSS FLATS² X .866 X 12 X WT. CU. IN.

M. STL	A/F ² X 2.94	ALUM ^N	A/F ² X 0.996
BRASS	A/F ² X 3.12	DURAL.	A/F ² X 1.04

4. WEIGHT OF SQUARE ROD PER FT.
 = SIDE OF SQ² X 12 X WT. PER CU. IN.
 M. STL. SIDE² X 3.4 | ALUM^N SIDE² X 1.15
 BRASS SIDE² X 3.6 | DURAL SIDE² X 1.20.

5. WEIGHT OF FLAT MATERIAL PER FT.
 = WIDTH X THICKNESS X 12 X WT. PER CU. IN.
 M. STL. W X T X 3.4 | ALUM^N W X T X 1.15
 BRASS W X T X 3.6 | DURAL W X T X 1.20

6. WEIGHT OF TUBE PER FT.
 = O. D. + I. D. X 1.57 X THICKNESS OF WALL X 12 X WT. PER CU. IN.

M. STL.	O. D. + I. D. X THICKNESS OF WALL X 5.34
BRASS.	" + " X " " X 5.65
COPPER	" + " X " " X 6.00
ALUM ^N	" + " X " " X 1.805
DURAL	" + " X " " X 1.885

S. SMITH & SONS
(MOTOR ACCESSORIES) LTD.
CHELTENHAM.

DR. TRER
 CH. APD

THICKNESS		WROUGHT IRON	STEEL	BRASS	GUN METAL	COPPER	LEAD	ZINC	WHITE METAL
IMPERIAL WIRE GAUGE	DECIMALS OF AN INCH								
7/0	.500"	19.87	20.40	21.86	22.68	22.87	29.59	18.72	20.88
6/0	.464"	18.44	18.93	20.28	21.04	21.18	27.66	17.37	19.36
5/0	.432"	17.16	17.62	18.87	19.58	19.75	25.74	16.19	18.02
4/0	.400"	15.89	16.32	17.45	18.14	18.26	23.67	14.97	16.68
3/0	.372"	14.78	15.18	16.28	16.86	17.01	22.17	13.94	15.52
2/0	.348"	13.83	14.20	15.21	15.78	15.92	20.74	13.05	14.52
1/0	.324"	12.87	13.22	14.16	14.68	14.81	19.31	12.14	13.51
1	.300"	11.92	12.24	13.08	13.60	13.70	17.75	11.23	12.51
2	.276"	10.97	11.26	12.07	12.52	12.63	16.45	10.35	11.51
3	.252"	10.02	10.29	11.02	11.43	11.53	15.03	9.45	10.52
4	.232"	9.22	9.47	10.14	10.57	10.61	13.83	8.70	9.68
5	.212"	8.43	8.66	9.27	9.67	9.70	12.64	7.95	8.85
6	.192"	7.63	7.84	8.40	8.75	8.78	11.44	7.20	8.01
7	.176"	6.86	7.04	7.55	7.87	7.90	10.29	6.48	7.20
8	.160"	6.36	6.53	7.00	7.29	7.32	9.54	6.00	6.68
9	.144"	5.72	6.13	6.30	6.56	6.58	8.58	5.40	6.00
10	.128"	5.08	5.22	5.58	5.83	5.85	7.62	4.80	5.33
11	.116"	4.61	4.73	5.07	5.29	5.31	6.91	4.35	4.84
12	.104"	4.13	4.24	4.54	4.73	4.75	6.20	3.89	4.34
13	.092"	3.66	3.76	4.03	4.17	4.21	5.49	3.45	3.84
14	.080"	3.18	3.26	3.50	3.63	3.66	4.77	3.00	3.34
15	.072"	2.86	2.94	3.14	3.26	3.30	4.30	2.70	3.00
16	.064"	2.54	2.60	2.80	2.89	2.92	3.81	2.40	2.66
17	.056"	2.14	2.19	2.35	2.44	2.46	3.21	2.02	2.25
18	.048"	1.91	1.96	2.10	2.18	2.20	2.86	1.80	2.00
19	.040"	1.59	1.63	1.75	1.81	1.83	2.38	1.49	1.67
20	.036"	1.43	1.47	1.57	1.63	1.64	2.14	1.35	1.50
21	.032"	1.28	1.31	1.41	1.46	1.47	1.92	1.24	1.34
22	.028"	1.11	1.14	1.22	1.26	1.28	1.66	1.05	1.16
23	.024"	.95	.97	1.04	1.08	1.09	1.43	.89	1.00
24	.022"	.87	.89	.96	.99	1.00	1.30	.82	.91
25	.020"	.79	.81	.87	.90	.91	1.18	.74	.83
26	.018"	.71	.73	.78	.81	.82	1.06	.67	.74
27	.0164"	.65	.67	.71	.74	.75	.97	.62	.68
28	.0148"	.58	.60	.64	.65	.66	.87	.54	.61
29	.0136"	.54	.55	.60	.61	.62	.81	.50	.57
30	.0124"	.50	.51	.55	.57	.58	.75	.47	.52

WEIGHT OF ONE SQ.
 FOOT OF METALS

STANDARD LIST
 NO 10

1
2
3
4
5
6
7
8

S. SMITH & SONS
(MOTOR ACCESSORIES) LTD.
CHELTENHAM.

DR. TR ER
CH. APPL. 1 2 3 4

DIAMETER		BRASS LBS.	STEEL LBS.	COPPER LBS.	ALUM. INIUM LBS.	DIAMETER		BRASS LBS.	STEEL LBS.	COPPER LBS.	ALUM. INIUM LBS.
BRIT. IMP. WIRE G.	DEC. OF AN INCH					BRITISH IMP. WIRE G. OR FRACT.	DEC. OF AN INCH				
27	.0164"	.00073	.00063	.00077	.00023	7/16"	.437"	.5455	.5129	.5827	.1741
26	.020"	.00114	.00106	.00119	.00036	15/32"	.468"	.626	.5888	.6722	.1999
23	.024"	.00165	.00152	.00170	.00051	1/2"	.500"	.7125	.6700	.765	.2279
21	.032"	.00293	.00272	.0030	.00092	17/32"	.531"	.8042	.7562	.8635	.2568
19	.040"	.00458	.00426	.0048	.00145	9/16"	.562"	.901"	.847	.968	.291
18	.048"	.00658	.0061	.0069	.0020	19/32"	.593"	1.004	.944	1.078	.324
17	.056"	.00897	.0082	.0093	.0028		.625"	1.113"	1.046	1.195	.360
16	.064"	.01171	.011	.0123	.0037	2/32"	.656"	1.227"	1.154	1.317	.397
15	.072"	.01482	.0136	.0152	.0046	11/16"	.687"	1.347"	1.266	1.446	.435
14	.080"	.01830	.017	.0191	.0057	23/32"	.718"	1.472"	1.384	1.536	.463
13	.092"	.02421	.0224	.0251	.0075	3/4"	.750"	1.600"	1.507	1.721	.518
12	.104"	.03093	.029	.0323	.0097	13/16"	.812"	1.881"	1.769	2.020	.608
11	.116"	.03848	.036	.040	.0121	7/8"	.875"	2.182"	2.051	2.342	.705
10	.128"	.04686	.043	.0487	.0147	15/16"	.937"	2.505	2.355	2.689	.810
9BA	.131"	.04983	.046	.052	.0157	1"	1.000"	2.850	2.680	3.060	.922
9	.144"	.05930	.055	.062	.0187	1 1/16"	1.062"	3.214	3.023	3.456	1.040
8BA	.152"	.06608	.062	.069	.0208	1 1/8"	1.125"	3.607	3.391	3.872	1.166
8	.160"	.07322	.068	.076	.0231	1 3/16"	1.187"	4.018	3.779	4.325	1.300
7	.176"	.08859	.083	.092	.0279	1 1/4"	1.250"	4.453	4.187	4.781	1.440
3/16"	.187"	.1002	.0942	.107	.032	1 5/16"	1.312"	4.909	4.616	5.271	1.588
6BA	.197"	.11099	.1034	.116	.035	1 3/8"	1.375"	5.389	5.067	5.786	1.743
7/32"	.218"	.1363	.1281	.1463	.0445	1 7/16"	1.437"	5.889	5.537	6.323	1.905
1/4"	.250"	.1781	.1675	.1912	.0568	1 1/2"	1.500"	6.412	6.030	6.885	2.074
5/32"	.281"	.2253	.2119	.2419	.0719	1 9/16"	1.562"	6.959	6.544	7.472	2.251
5/16"	.312"	.2783	.2617	.2988	.0888	1 5/8"	1.625"	7.526	7.077	8.081	2.439
2BA	.324"	.3002	.2797	.3140	.0948	1 11/16"	1.687"	8.115	7.631	8.713	2.629
11/32"	.343"	.3366	.3165	.3614	.1074	1 3/4"	1.750"	8.728	8.207	9.371	2.829
1BA	.364"	.3789	.3531	.3962	.1196	1 7/8"	1.875"	10.020	9.422	10.758	3.241
3/8"	.375"	.4007	.3768	.4303	.1279	2"	2.000"	11.400	10.720	12.240	3.688
13/32"	.406"	.4702	.4422	.5049	.1501	2 1/8"	2.125"	12.870	12.102	13.818	4.163
0BA	.412"	.4854	.4525	.508	.1534	2 1/2"	2.500"	17.812	16.750	19.125	5.762

ROUND BARS
BRASS, STEEL, COPPER, ALUM.
WEIGHT PER RUNNING FOOT

STANDARD LIST.
NO 11

DR.	TR E.R.	1	5
CH.	AP	2	6
		3	7
		4	8

HEXAGONS
BRASS & STEEL
WEIGHT PER RUNNING FT.

STANDARD LIST
No 12

S. SMITH & SONS
(MOTOR ACCESSORIES) LTD.
CHELTENHAM

BA. No	WIDTH ACROSS FLATS		WEIGHT IN LBS.	
	MAX.	MIN.	BRASS	STEEL
15	.061"	.059"	.0112	.0106
14	.069"	.067"	.0144	.0136
13	.083"	.081"	.0210	.0198
12	.090"	.088"	.0247	.0233
11	.103"	.101"	.0325	.0306
10	.117"	.115"	.0420	.0398
9	.131"	.129"	.0528	.0498
8	.152"	.150"	.0711	.0670
7	.172"	.170"	.0915	.0860
6	.193"	.190"	.1144	.1080
5	.220"	.217"	.1490	.1400
4	.248"	.245"	.1882	.1778
3	.282"	.279"	.2480	.2340
2	.324"	.321"	.3250	.3060
1	.365"	.362"	.4110	.3870
0	.413"	.410"	.5280	.4980

SIZE OF WHIT SCREW	WIDTH ACROSS FLATS		WEIGHT IN LBS.	
	MAX.	MIN.	BRASS	STEEL
1/4"	.525"	.520"	.852	.803
5/16"	.600"	.595"	1.11	1.05
3/8"	.710"	.705"	1.56	1.47
7/16"	.820"	.815"	2.08	1.96
1/2"	.920"	.915"	2.62	2.47
9/16"	1.010"	1.002"	3.11	3.03
5/8"	1.100"	1.092"	3.75	3.53
11/16"	1.200"	1.192"	4.46	4.20
3/4"	1.300"	1.292"	5.24	4.94
13/16"	1.390"	1.382"	6.00	5.65
7/8"	1.480"	1.472"	6.80	6.40
1"	1.670"	1.662"	8.66	8.16
1 1/8"	1.860"	1.850"	10.75	10.13
1 1/4"	2.050"	2.040"	13.05	12.3
1 3/8"	2.220"	2.210"	14.1	13.3
1 1/2"	2.410"	2.400"	18.1	17.0
1 5/8"	2.580"	2.570"	20.7	19.5
1 3/4"	2.760"	2.750"	23.6	22.3
2"	3.150"	3.140"	30.9	29.1

S. SMITH & SONS
(MOTOR ACCESSORIES) LTD.
CHELTENHAM.

DR.	1	2	3
TRER.	2	6	6
CH.	3	7	8
	4		

QUANTITY OF MATERIAL IN FEET
 REQUIRED FOR 1000 PIECES

STANDARD LIST
NO 13

LENGTH OF PART	DIA. OF PART				L OF PART	DIA. OF PART				L OF PART	DIA. OF PART				L OF PART	DIA. OF PART			
	UP TO 5/16"	5/16" TO 3/8"	3/8" TO 7/8"	ABOVE 7/8"		UP TO 5/16"	5/16" TO 3/8"	3/8" TO 7/8"	ABOVE 7/8"		UP TO 5/16"	5/16" TO 3/8"	3/8" TO 7/8"	ABOVE 7/8"		UP TO 5/16"	5/16" TO 3/8"	3/8" TO 7/8"	ABOVE 7/8"
1/4"	7.1	10.0	12.9	18.5	2 5/16"	41.4	44.2	47.1	52.8	1 3/32"	100	103	106	111	2 1/16"	194	197	200	205
1/32"	8.6	11.4	14.3	20.0	1 3/32"	42.9	45.7	48.5	54.2	1 1/16"	103	106	108	114	2 1/8"	200	203	205	211
3/64"	10.0	12.9	15.7	21.4	2 3/64"	44.2	47.1	50.0	55.7	1 3/32"	106	108	111	117	2 3/16"	205	208	211	217
1/16"	11.4	14.3	17.1	22.8	7/16"	45.7	48.5	51.4	57.1	1 1/8"	108	111	114	120	2 1/4"	211	214	217	222
5/64"	12.9	15.7	18.5	24.3	2 9/64"	47.1	50.0	52.8	58.6	5/32"	111	114	117	123	2 5/16"	217	220	222	228
3/32"	14.3	17.1	20.0	25.7	1 5/32"	48.5	51.4	54.2	60.0	3/16"	114	117	120	126	2 3/8"	222	225	228	234
7/64"	15.7	18.5	21.4	27.1	3 1/64"	50.0	52.8	55.7	61.4	1 7/32"	117	120	123	128	2 7/16"	228	231	234	240
1/8"	17.1	20.0	22.8	28.5	1/2"	51.4	54.2	57.1	62.8	1 1/4"	120	123	126	131	2 1/2"	234	237	240	245
9/64"	18.5	21.4	24.3	30.0	1 7/32"	54.2	57.1	60.0	65.6	1 9/32"	123	126	128	134	2 9/16"	240	243	245	251
5/32"	20.0	22.8	25.7	31.4	9/16"	57.1	60.0	62.8	68.5	1 5/16"	126	128	131	137	2 5/8"	245	248	251	257
1 1/64"	21.4	24.3	27.1	32.8	1 9/32"	60.0	62.8	65.6	71.3	1 1/32"	128	131	134	140	2 1 1/16"	251	254	257	263
3/16"	22.8	25.7	28.5	34.8	5/8"	62.8	65.6	68.5	74.2	3/8"	131	134	137	143	2 3/4"	257	260	263	268
1 3/64"	24.3	27.1	30.0	35.7	2 1/32"	65.6	68.5	71.3	77.1	1 13/32"	134	137	140	146	2 13/16"	263	265	268	274
7/32"	25.7	28.5	31.4	37.1	1 1/16"	68.5	71.3	74.2	80.0	7/16"	137	140	143	148	2 7/8"	268	271	274	280
1 5/64"	27.1	30.0	32.8	38.5	2 3/32"	71.3	74.2	77.1	82.8	1 5/32"	140	143	146	151	2 15/16"	274	277	280	285
1/4"	28.5	31.4	34.2	40	3/4"	74.2	77.1	80.0	85.6	1 1/2"	143	146	148	154	3"	280	283	285	291
1 1/64"	30.0	32.8	35.7	41.4	2 5/32"	77.1	80.0	82.8	88.5	1 9/16"	148	151	154	160	3 1/16"	285	288	291	297
9/32"	31.4	34.2	37.1	42.9	1 3/16"	80.0	82.8	85.6	91.3	1 5/8"	154	157	160	165	3 1/8"	291	294	297	302
1 3/64"	32.8	35.7	38.5	44.2	2 7/32"	82.8	85.6	88.5	94.2	1 1 1/16"	160	162	165	171	3 3/16"	297	300	302	308
5/16"	34.2	37.1	40	45.7	7/8"	85.6	88.5	91.3	97.0	1 3/4"	165	168	171	177	3 1/4"	302	305	308	314
2 1/64"	35.7	38.5	41.4	47.1	2 9/32"	88.5	91.3	94.2	100	1 3 1/16"	171	174	177	183	3 5/16"	308	311	314	320
1 1/32"	37.1	40	42.9	48.5	1 5/16"	91.3	94.2	97.0	103	1 7/8"	177	180	183	188	3 3/8"	314	317	320	325
2 3/64"	38.5	41.4	44.2	50.0	1 1 1/32"	94.2	97.0	100	106	1 15/16"	183	186	188	194	3 7/16"	320	322	325	331
3/8"	40	42.9	45.7	51.4	1"	97.0	100	103	108	2"	188	191	194	200	3 1/2"	325	328	331	334

THIS TABLE CAN BE USED FOR ROUND SQUARE OR HEXAGON MATERIAL.

THE LENGTHS GIVEN ARE CALCULATED ON A BASIS OF 8 FT. BAR WITH 4" PER BAR CHUCKING.

ALLOWANCE & INCLUDE ALLOWANCE PARTS & SCREW PARTING

ALLOWANCE UP TO 5/16" DIA. - 1/16"

5/16" TO 5/8" - 3/32"

5/8" TO 7/8" - 1/8"

ABOVE 7/8" - 3/16"

PIN NO	MATL	INS. A	M/M	INS. B	M/M	INS. C	M/M	INS. D	M/M
7755/1	MS.	.315"	8.00	.057"	1.45	.051"	1.30	.02"	0.50
/2	"	.220"	5.60	.057"	1.45	.051"	1.30	.02"	0.50
/3	"	.350"	8.90	.076"	1.93	.069"	1.75	.02"	0.50
/4	"	.283"	7.20	.075"	1.90	.069"	1.75	.02"	0.50
/5	BRASS	.366"	9.30	.091"	2.30	.083"	2.10	.02"	0.50
/6	MS	.158"	4.00	.058"	1.48	.055"	1.40	.02"	0.50
/7	BRASS	.220"	5.60	.057"	1.45	.051"	1.30	.02"	0.50
/8	MS	.728"	18.50	.064"	1.63	.049"	1.25	.02"	0.50
/9	"	.187"	4.75	.028"	0.70	.024"	0.60	.01"	0.25
/10	"	.610"	15.50	.040"	1.02	.028"	0.70	.01"	0.25
/11	"	1.00"	25.40	.035"	.090	.014"	.35		
/12	"	.295"	7.50	.069"	1.75	.063"	1.60	.02"	0.50
/13	"	.551"	14.00	.053"	1.35	.041"	1.05	.02"	0.50
/14	"	1.24"	31.50	.073"	1.85	.047"	1.20	.02"	0.50
/15	"	.591"	15.00	.059"	1.50	.047"	1.20	.02"	0.50
/16	BRASS	.138"	3.50	.048"	1.23	.046"	1.16	.01"	0.25
/17	"	.374"	9.50	.063"	1.60	.063"	1.60	.02"	0.50
/18	"	.276"	7.00	.033"	0.84	.028"	0.70	.01"	0.25
/19	MS.	.224"	5.70	.030"	0.76	.026"	0.65	.01"	0.25
/20	MS	.276"	7.00	.056"	1.42	.050"	1.28	.01"	0.25
/21	BRASS	.295"	7.50	.069"	1.75	.063"	1.60	.02"	0.50
/22	"	.276"	7.00	.041"	1.05	.035"	.90	.01"	0.25
/23	MS.	.610"	15.5	.083"	2.12	.071"	1.80	.02"	0.50
/24	MS	.150"	3.80	.028"	0.70	.024"	0.60	.01"	0.25
/25	BRASS	.591"	15.0	.059"	1.50	.047"	1.20	.02"	0.50
/26	MS	.394"	10.0	.070"	1.80	.063"	1.60	.02"	0.50
/27	"	.394"	10.0	.0335	.85	.026"	.65	.02"	0.50
/28	"	.276"	7.0	.041"	1.05	.035"	.090	.01"	0.25
/29	BRASS	.187"	4.75	.082"	2.082	.078"	1.981	.02"	0.50
/30	MS	.750"	19.05	.050"	1.27	.020"	0.508	.02"	0.50



TAPER PINS.

STANDARD LIST
EW. 7755