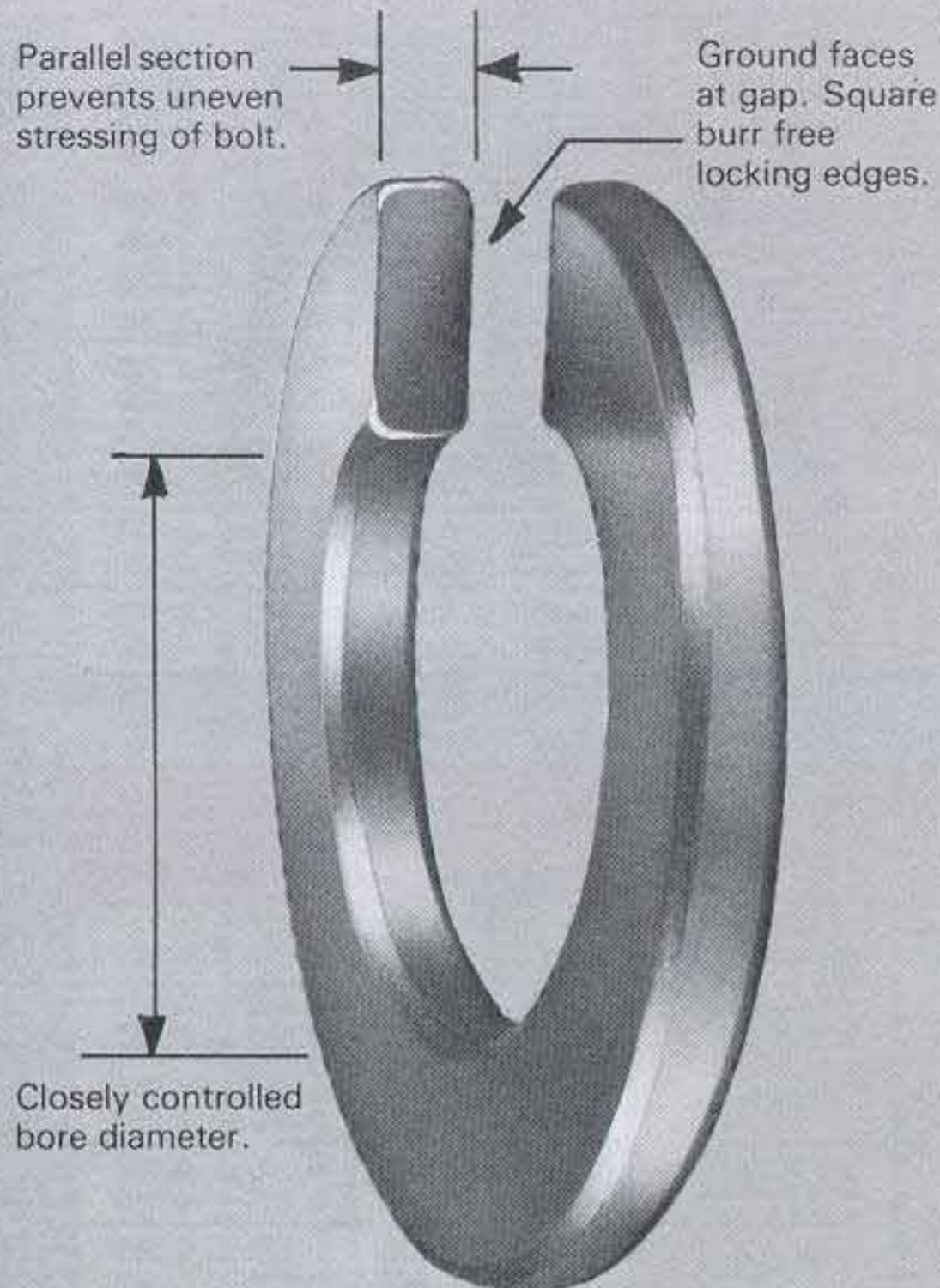


# SPRING WASHERS FOR AEROSPACE AND OTHER DEMANDING APPLICATIONS



Cross single coil spring washers are made by a novel process to satisfy the standards of quality and performance necessary for high technology industries.

The types listed are normally available from stock.

Washers can be manufactured to customers' requirements in various materials and finishes.

Quality Control to Ministry of Defence Standard DEF 05-24.

BRITISH STANDARD 2 SP.47			Material: Spring Steel S 203 Finish: Cadmium Plate			
Size	Standard Part Number	Cross Part Number	A	B	C	D
10 BA	SP 47 Y	02111001	0.071 0.068	0.137 0.124	0.060 0.040	0.023 0.020
8 BA	SP 47 Z	02111002	0.091 0.088	0.175 0.160	0.070 0.050	0.028 0.024
6 BA & 4-40 UNC	SP 47 A	02111003	0.116 0.113	0.244 0.225	0.092 0.072	0.041 0.036
4 BA & 6-32 UNC	SP 47 B	02111004	0.146 0.143	0.310 0.287	0.092 0.072	0.041 0.036
8-32 UNC	SP 47 X	02111005	0.168 0.165	0.348 0.325	0.100 0.080	0.045 0.040
2 BA & 10-32 UNF	SP 47 C	02111006	0.195 0.191	0.399 0.375	0.116 0.096	0.053 0.048
1/4	SP 47 E	02111007	0.256 0.251	0.532 0.507	0.150 0.120	0.061 0.056
5/16	SP 47 G	02111008	0.320 0.314	0.620 0.594	0.180 0.150	0.069 0.064
3/8	SP 47 J	02111009	0.383 0.376	0.723 0.696	0.200 0.170	0.077 0.072
7/16	SP 47 L	02111010	0.447 0.439	0.819 0.791	0.220 0.190	0.077 0.072
1/2	SP 47 N	02111011	0.510 0.501	0.950 0.921	0.240 0.210	0.085 0.080
9/16	SP 47 P	02111012	0.574 0.564	1.054 1.024	0.270 0.240	0.097 0.092
5/8	SP 47 Q	02111013	0.636 0.626	1.176 1.146	0.290 0.260	0.109 0.104

# CROSS

**CROSS MANUFACTURING CO (1938) LIMITED**

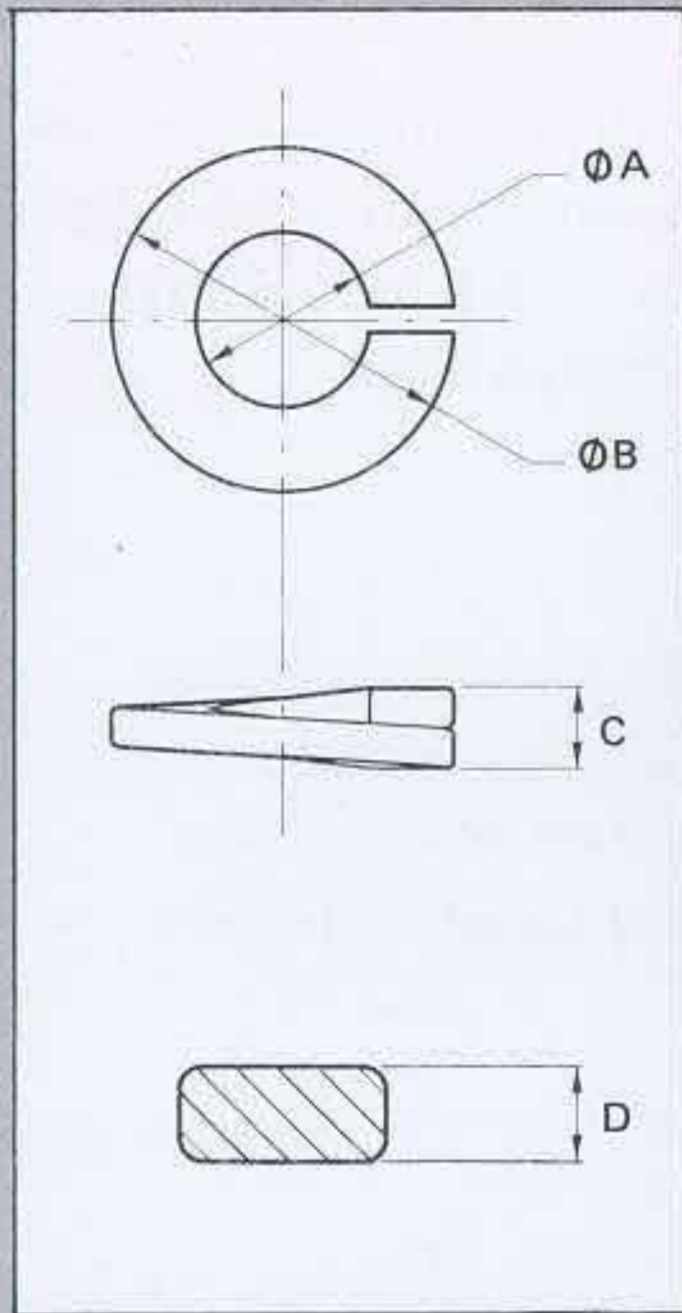
Midford Road, Bath BA2 5RR England, Tel: (01225) 837000. Fax: (01225) 834115

E-mail: mail@crossmanufacturing.com Website: www.crossmanufacturing.com

Also at Devizes SN10 2EY Wilts, Tel: (01380) 722421 Fax: (01380) 722405

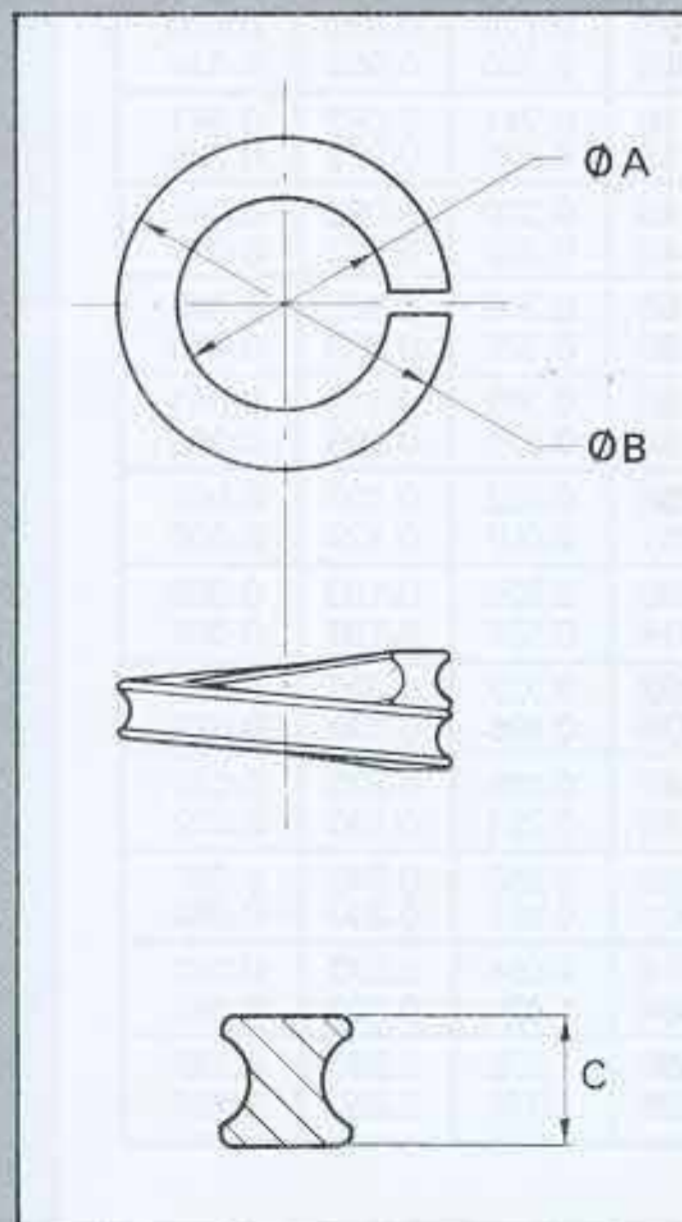
E-mail: mail@cross-devizes.com

BSEN ISO 9002: 1994. CERT. No. 924766. C.A.A. No. AI/3610/52



STAINLESS STEEL			Material Spec.: DTD 189 A			
Size	Standard Part Number	Cross Part Number	A	B	C	D
4 BA & 6-32 UNC	K 11402	02304025	0.146 0.143	0.275 0.260	0.092 0.072	0.041 0.036
8-32 UNC	K 11411	02304026	0.163 0.160	0.340 0.325	0.100 0.080	0.045 0.040
2 BA & 10-32 UNF	K 11403	02304027	0.199 0.195	0.380 0.365	0.116 0.096	0.056 0.052
1/4	K 11404	02304028	0.265 0.260	0.485 0.470	0.150 0.120	0.061 0.056
5/16	K 11405	02304029	0.326 0.320	0.580 0.565	0.180 0.150	0.065 0.060
3/8	K 11406	02304030	0.390 0.383	0.685 0.670	0.200 0.170	0.069 0.064
7/16	K 11407	02304031	0.458 0.450	0.785 0.770	0.220 0.190	0.073 0.068
1/2	K 11408	02304032	0.524 0.515	0.900 0.885	0.240 0.210	0.077 0.072
9/16	K 11409	02304033	0.585 0.575	1.005 0.990	0.270 0.240	0.081 0.076
5/8	K 11410	02304034	0.650 0.640	1.090 1.075	0.290 0.260	0.085 0.080

HEAT RESISTING			Material: 14% Tungsten High Speed Steel Finish: Nickel Plate Max. Operating Temperature: 450°C			
Size	Standard Part Number	Cross Part Number	A	B	C	D
10-32 UNF	UBS. 7-D	02423035	0.195 0.191	0.375 0.360	0.140 0.092	0.057 0.052
1/4	UBS. 7-E	02423036	0.256 0.251	0.475 0.460	0.157 0.097	0.061 0.057
5/16	UBS. 7-G	02423037	0.320 0.314	0.575 0.560	0.165 0.105	0.065 0.060
3/8	UBS. 7-J	02423038	0.383 0.376	0.675 0.660	0.173 0.113	0.069 0.064
7/16	UBS. 7-L	02423039	0.447 0.439	0.775 0.760	0.190 0.118	0.073 0.068
1/2	UBS. 7-N	02423040	0.510 0.501	0.885 0.870	0.198 0.126	0.077 0.072



GROVER TYPE			Material: Spring Steel S203 Finish: Cadmium Plate		
Size	Standard Part Number	Cross Part Number	A	B	C
6 BA & 4-40 UNC	KJ 4502	02211014	0.138 0.118	0.260 0.240	0.065 0.055
4 BA & 6-32 UNC	KJ 4503	02211015	0.166 0.146	0.290 0.270	0.065 0.055
3 BA & 8-32 UNC	KJ 4505	02211016	0.180 0.160	0.310 0.290	0.070 0.060
2 BA & 10-32 UNF	KJ 4506	02211017	0.207 0.187	0.353 0.333	0.075 0.065
1 BA	KJ 4507	02211018	0.245 0.225	0.385 0.365	0.080 0.070
1/4	KJ 4508	02211019	0.285 0.265	0.450 0.430	0.105 0.095
5/16	KJ 4509	02211020	0.360 0.340	0.595 0.575	0.135 0.125
3/8	KJ 4510	02211021	0.415 0.395	0.650 0.630	0.150 0.140
7/16	KJ 4511	02211022	0.480 0.460	0.780 0.760	0.200 0.190
1/2	KJ 4512	02211023	0.550 0.530	0.850 0.830	0.200 0.190
5/8	KJ 4514	02211024	0.710 0.690	1.110 1.090	0.250 0.245



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