

SEALING  
WASHERS



ALL TYPES | ALL MATERIALS | METRIC & IMPERIAL

THE UK'S SPECIALIST  
SUPPLIER OF  
**SEALING WASHERS**



**BARNWELL**  
THE SEAL OF APPROVAL



## Total Sealing Solutions

Founded in 1972, M Barnwell Services is a family business that prides itself on providing expert industry knowledge, technical expertise, products and services to over 5,000 customers globally – quickly and reliably. Our range of fluid sealing products include O Rings, Oil Seals / Rotary Shaft Seals, Hydraulic and Pneumatic Seals, Gaskets, Fasteners, Sealing Kits, Special Rubber Mouldings and many more.

We aim to work in partnership with you to reduce your supplier base, inventory and long-term costs. Applying our unique product knowledge to your specific needs, we will always offer the right sealing solution for your industry and application.

M Barnwell Services range of services include:

- ❖ Stocking & Supplying a vast and diverse product range – over 35,000 stock lines
- ❖ An efficient logistical capability offering International coverage
- ❖ Industry leading bespoke Branding and Packaging technology
- ❖ Full documentation service and manufacturer guarantees
- ❖ Strategic partnerships with large Blue Chip customers and leading worldwide brands
- ❖ Seal Maker and Clean Room services that are tailor-made to the customer's needs
- ❖ A dedicated Export Department – providing sealing solutions to over 60 countries

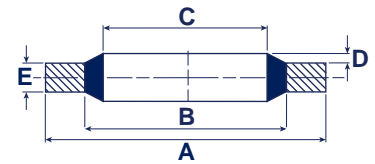
# STANDARD RANGE

## BRITISH IMPERIAL

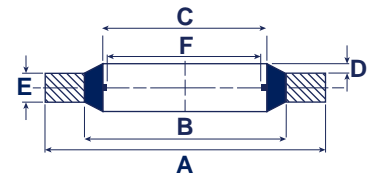


REFERENCE	SIZE (INCHES)		A +0.13 -0.00	B +0.10 -0.10	C +0.10 -0.10	D	E +0.15 -0.15	F +0.20 -0.20	APPROX BURST PRESSURE (BAR)
	BSP	BOLT							
MB45-001*	-	6BA	6.35	4.09	3.05			-	2150
MB45-002*	-	4BA	7.26	5.26	4.12			-	1570
MB45-003*	-	2BA	8.38	6.35	5.21			-	1375
MB45-004	-	1/4	13.21	8.00	6.86	0.20/ 0.45	1.22	4.70	2450
MB45-005	-	1/4	13.34	9.53	6.99			4.70	1700
MB45-006	-	5/16	13.34	9.53	8.31			6.10	1700
MB45-007	-	5/16	14.22	10.04	8.64			6.10	1750
MB45-020	1/8	3/8	15.88	11.84	10.37			8.56	1500
MB45-008	-	0.4	18.36	12.45	11.26			8.56	1950
MB45-009	-	7/16	19.05	13.08	11.69			8.80	1900
MB45-021	1/4	1/2	20.57	15.21	13.74			11.45	1550
MB45-010	-	9/16	22.23	16.39	14.86		2.03	11.58	1575
MB45-022	-	0.6	22.23	17.30	15.83			12.10	1310
MB45-011	-	5/8	25.40	18.75	16.51			12.90	1550
MB45-023	3/8	-	23.80	18.75	17.28			14.96	1260
MB45-012	-	11/16	25.40	19.69	18.16			14.50	1320
MB45-024	-	3/4	26.92	21.21	19.69			15.80	1260
MB45-025	1/2	13/16	28.58	23.01	21.54			18.64	1150
MB45-026	5/8	7/8	31.75	24.97	23.49			20.60	1250
MB45-013	-	15/16	33.27	26.04	24.26			20.20	1275
MB45-027	3/4	1.0	34.93	28.53	27.05		2.50	24.13	1060
MB45-028	-	1.1/16	38.61	30.61	27.82			22.90	1250
MB45-014	-	1.1/8	36.58	30.86	29.33	0.25/ 0.51		23.90	900
MB45-029	7/8	1.3/16	38.10	32.29	30.81			27.89	900
MB45-015	-	1.1/4	41.40	35.69	32.64		3.38	27.10	800
MB45-030	1.0	1.5/16	42.80	36.88	33.89		2.50	30.30	810
MB45-016	-	1.3/8	44.45	38.99	35.94			29.50	700
MB45-017	-	1.1/2	47.75	42.04	38.96		3.38	32.70	700
MB45-032	1.1/4	1.5/8	52.38	45.93	42.93		2.50	38.96	690
MB45-018	-	1.3/4	57.15	48.39	45.34		3.38	37.90	875
MB45-033	1.1/2	1.7/8	58.60	51.39	48.44		2.50	44.86	690
MB45-019	-	2.0	63.50	54.74	51.69			43.60	780
MB45-034	1.3/4	2.1/8	69.85	58.30	54.89		3.38	50.80	950
MB45-035	-	2.1/4	70.36	61.09	58.04		3.25	-	740
MB45-036*	2.0	-	73.03	63.63	60.58		2.50	56.67	700
MB45-037	-	2.1/2	77.72	67.44	64.39			55.40	750
MB45-038	2.1/4	-	79.50	69.98	66.68		3.38	62.80	670
MB45-039	2.1/2	-	90.17	79.38	76.08			72.20	680
MB45-079	3.0	-	101.47	92.84	89.09			85.00	550

### PLAIN



### SELF-CENTRALISING



WHEN ORDERING  
SELF-CENTRALISING BONDED  
WASHERS ADD SC TO BARNWELL  
REFERENCE, EG MBSC45-004

\*Washers not available in Self-Centralising.  
All dimensions in mm unless otherwise stated.

## STANDARD MATERIALS

Bonded Washers are available in the following standard materials:

- ❖ Nitrile
- ❖ HNBR
- ❖ Viton™
- ❖ EPDM
- ❖ Mild Steel
  - Zinc Plated
  - Clear Passivate
  - Gold Passivate
- ❖ Stainless Steel
- ❖ Aluminium

Information on non-standard materials is available on request.

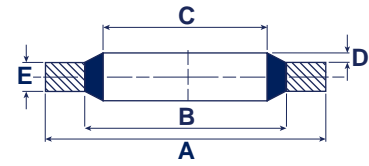
# GERMAN METRIC RANGE

METRIC THREADS TO ISO R261 BS3643

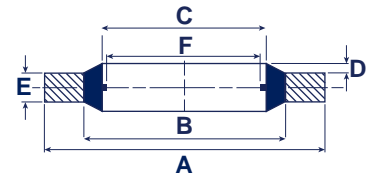


REFERENCE	THREAD SIZE	A +0.13 -0.00	B +0.10 -0.10	C +0.10 -0.10	D +0.25 -0.00	E +0.15 -0.15	F +0.20 -0.20	APPROX BURST PRESSURE (BAR)
MB45-201*	3.5	7.20	5.20	4.10			-	1600
MB45-202	4	7.00	5.40	4.50			3.40	1250
MB45-203	5	9.00	6.80	5.70			4.50	1400
MB45-204	5	10.00	7.40	5.70		1.00	4.50	1500
MB45-205	5.5	9.20	7.20	6.20			4.70	1220
MB45-206	6	10.00	8.00	6.70			4.70	1130
MB45-207	6	11.00	8.20	6.70			4.70	1510
MB45-208*	6	11.00	8.20	6.70	0.30	2.50	-	1480
MB45-209*	6.5	12.00	8.80	7.10			-	1560
MB45-210	6.7	10.20	8.60	7.30			5.77	1330
MB45-211*	8	13.40	9.40	8.50			-	1780
MB45-212	8	13.00	10.00	8.70		1.00	6.40	1330
MB45-213	8	14.00	10.40	8.70			6.40	1550
MB45-214*	8	16.00	10.40	8.70			-	2150
MB45-215	8.5	13.30	10.50	9.30			6.90	1200
MB45-216	10	15.88	12.00	10.35		2.00	8.56	1450
MB45-217	10	16.00	12.40	10.70			8.05	1350
MB45-218	10	18.00	12.40	10.70			8.05	1880
MB45-219	11	16.30	12.70	11.40			9.80	1250
MB45-220*	11	18.50	13.70	11.80			-	1540
MB45-221	11	19.10	13.50	11.80			9.80	1770
MB45-222	12	18.00	14.30	12.70			9.73	1250
MB45-223	12	20.00	14.40	12.70			9.73	1680
MB45-224*	13	20.00	15.40	13.70			-	1340
MB45-225	13	22.00	15.40	13.70		1.50	10.80	1810
MB45-226	13.5	18.70	15.70	14.00			11.30	900
MB45-227	14	22.00	16.40	14.70			11.38	1510
MB45-228*	15	22.70	17.78	16.00			-	1260
MB45-229	16	24.00	18.40	16.70			13.41	1400
MB45-230	17	24.00	19.20	17.40			13.08	1150
MB45-231	17.5	24.70	20.10	18.00			13.60	1070
MB45-232	18	26.00	20.40	18.70			14.76	1275
MB45-233	20	28.00	22.50	20.70			16.76	1150
MB45-234	21	28.70	23.30	21.50		2.50	17.80	1080
MB45-235*	22	28.00	24.20	22.50		1.50	-	760
MB45-236	22	30.00	24.40	22.70	0.40	2.00	18.74	1100
MB45-237*	22	30.00	24.40	22.70		3.00	-	1080
MB45-238	24	32.00	26.40	24.70			20.11	1050
MB45-239	26	35.00	28.40	26.70			22.30	1050
MB45-240	27	36.00	29.00	27.20			23.30	1130
MB45-241*	28	37.00	30.40	28.70			-	1000
MB45-242	30	39.00	33.00	31.00		2.00	25.70	860
MB45-243	33	42.00	35.80	33.70			28.70	900
MB45-244	33	43.00	36.40	34.30			28.70	880
MB45-245	36	46.00	38.80	36.70			31.10	880
MB45-246	39	51.00	41.90	40.00		2.50	34.10	1020
MB45-247	42	53.00	44.40	42.70			36.50	940
MB45-248	48	59.00	50.80	48.70			41.90	800
MB45-249*	51	60.00	54.10	52.00		3.00	-	540
MB45-250*	52	64.50	56.40	59.09			-	710
MB45-251*	60	73.00	63.00	60.70			-	780
MB45-252*	68	79.50	72.10	68.60		3.50	-	510
MB45-253*	75	90.30	79.10	76.08			3.38	700
MB45-254*	88	101.35	92.10	89.09			3.25	510
MB45-255*	125	143.67	132.70	127.00		5.00	-	420

## PLAIN



## SELF-CENTRALISING



WHEN ORDERING SELF-CENTRALISING BONDED WASHERS ADD SC TO BARNWELL REFERENCE, EG MBSC45-004

\*Washers not available in Self-Centralising.

# FRENCH METRIC RANGE

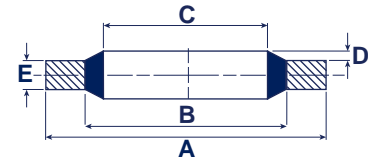
METRIC THREADS TO ISO R261 BS3643



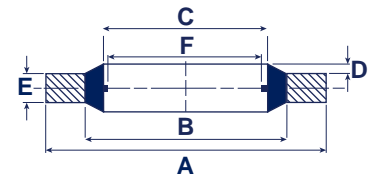
REFERENCE	THREAD SIZE	A +0.13 -0.00	B +0.10 -0.10	C +0.10 -0.10	D +0.25 -0.00	E +0.10 -0.10	F +0.20 -0.20	APPROX BURST PRESSURE (BAR)
MB45-301*	3	7.50	5.00	3.60			-	1950
MB45-302	4	9.00	6.00	4.60		1.00	3.40	2000
MB45-303	5	10.00	7.00	5.60			4.50	1780
MB45-304	6	11.00	8.00	6.60			4.70	1680
MB45-305*	6	13.27	8.00	6.85	0.30	1.30	-	1970
MB45-306	6	11.40	8.40	7.00		1.00	4.70	1540
MB45-307	8	13.00	10.00	8.60			6.40	1330
MB45-310	10	17.00	12.10	10.70			8.56	1730
MB45-312	11	18.10	13.20	11.80			9.80	1600
MB45-313	12	19.00	14.10	12.70			9.73	1530
MB45-315	13	20.10	15.20	13.80	0.40	1.50	10.80	1440
MB45-316	14	21.00	16.10	14.70	0.30		11.38	1370
MB45-317	16	23.00	18.10	16.70			13.41	1240
MB45-318	17	23.70	18.80	17.40	0.40		13.08	1200
MB45-319*	16.5	23.90	18.70	17.20	0.40	2.10	-	1020
MB45-320	18	27.00	20.40	18.70	0.30		14.76	1450
MB45-321	20	29.00	22.40	20.70			16.76	1340
MB45-323	21	30.00	23.40	21.70			17.80	1290
MB45-324	22	31.00	24.40	22.70			18.74	1240
MB45-325	23	32.00	25.40	23.70			19.30	960
MB45-326	24	33.00	26.40	24.70		2.00	20.11	1160
MB45-327	26	35.30	28.70	27.00			22.30	870
MB45-328	27	36.00	29.40	27.70			23.30	1060
MB45-329	28	36.00	30.30	28.60			24.80	730
MB45-330*	28.5	37.50	30.90	29.20	0.40		-	810
MB45-331	30	39.00	32.40	30.70			25.70	970
MB45-332	33	42.00	35.40	33.70			28.70	900
MB45-333	36	48.00	39.60	37.00			31.10	1010
MB45-334	39	51.00	42.60	40.00		2.50	34.10	950
MB45-335	42	54.00	45.60	43.00		+0.15 -0.15	36.50	890
MB45-336	45	57.00	48.60	46.00			39.50	860
MB45-337	48	60.00	51.60	49.00			41.90	790

\*Washers not available in Self-Centralising.

## PLAIN



## SELF-CENTRALISING

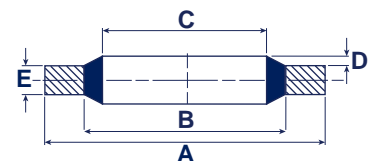


WHEN ORDERING SELF-CENTRALISING BONDED WASHERS ADD SC TO BARNWELL REFERENCE, EG MBSC45-004

REFERENCE	THREAD SIZE BSPF	A +0.00 -0.20	B +0.20 -0.00	C +0.20 -0.00	D +0.25 -0.00	E +0.15 -0.15	APPROX BURST PRESSURE (BAR)
MB45-519	1/16	12.70	9.90	8.30			1100
MB45-510	1/8	14.70	12.00	10.40			930
MB45-511	1/4	18.70	15.75	13.85		1.25	790
MB45-512	3/8	22.70	19.25	17.35			775
MB45-513	1/2	26.70	23.55	21.65	0.25		580
MB45-514	3/4	32.50	29.20	27.30			500
MB45-515	1.0	39.50	36.10	34.20			410
MB45-516	1.1/4	49.50	44.70	42.80		2.00	500
MB45-517	1.1/2	55.50	50.60	48.70			430
MB45-518	2.0	68.50	62.40	60.50			445

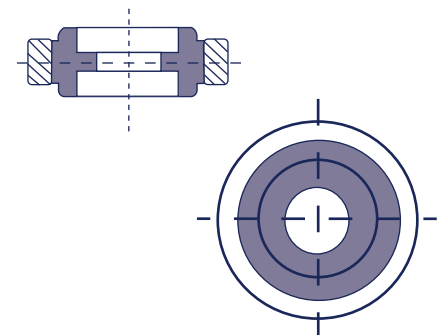
## CETOPS

(Recommended in ISO 1179:1973)



## BARDOK

Sealing Washers



A unique sealing washer, with its own elastomer configuration. Popular wherever there is an anaesthetic gas application, such as hospitals, dental surgeries, veterinary clinics, etc.

More information available on request.

# FRENCH METRIC RANGE

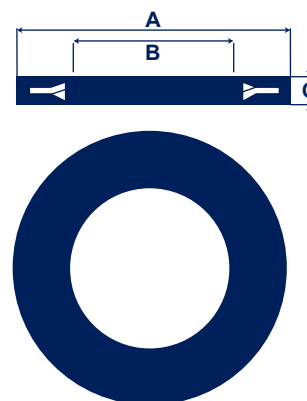
METRIC THREADS TO ISO R261 BS3643



PART NO.	TO SUIT BOLT DIA.		A		B		C	
	INCH	mm	INCH	mm	INCH	mm	INCH	mm
MB1321-001	6 B.A. (.110) & No.4 U.N.C. (.112)	2.5/2.6	.300	7.62	.120	3.05	.050	1.27
MB1321-002	4 B.A. (.140) & No.6 U.N.C. (.138)	3	.340	8.64	.150	3.81	.050	1.27
MB1321-003	3 B.A. (.161) & No.8 U.N.C. (.164)	3.5/4	.400	10.16	.170	4.32	.055	1.40
MB1321-004	2 B.A. (.185) 3/16"	4	.440	11.18	.195	4.95	.060	1.52
MB1321-005	1/4"	6	.525	13.34	.260	6.60	.070	1.78
MB1321-006	5/16"	8	.640	16.26	.325	8.26	.070	1.78
MB1321-007	3/8"	9	.730	18.54	.385	9.78	.080	2.03
MB1321-008	7/16"	10	.825	20.56	.448	11.38	.090	2.29
MB1321-009	1/2"	12	.920	23.37	.515	13.08	.090	2.29
MB1321-010	9/16"	14	1.010	25.65	.580	14.73	.090	2.29
MB1321-011	5/8"	16	1.110	28.19	.640	16.26	.100	2.54
MB1321-012	3/4"	18	1.295	32.90	.765	19.43	.105	2.67
MB1321-013	7/8"	22	1.440	36.58	.900	22.86	.110	2.79
MB1321-014	1"	24	1.675	42.55	1.020	26.29	.120	3.05

## BARLOC

Rubber Covered Lock Washers

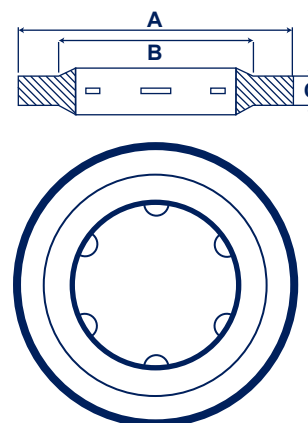


A dual purpose, vibration resistive lock washer, which protects as it locks. Ideal for surface coated with paint, plating, enamel, etc. Suitable for use with water, mineral base oils and alkalis, over a temperature range of -10°C to +80°C. Extensively used in the automotive and domestic appliance industries.

PART NO.	THREAD DIA.		A		B		±.005	±.013
	INCH	mm	INCH	mm	INCH	mm	INCH	mm
MB1127-700	2 B.A. (.185) 3/16 No.10 U.N. (.190)	5	.385	9.78	.220	5.59	.050	1.27
MB1127-701	1/4	6	.517	13.13	.292	7.42	.060	1.53
MB1127-702	5/16	8	.557	14.15	.357	9.07	.060	1.53
MB1127-703	3/8 & 1/8 B.S.P. (.383)	10	.622	15.80	.427	10.85	.060	1.53
MB1127-704	7/16	11/12	.747	18.98	.482	12.24	.060	1.53
MB1127-705	1/2 & 1/4 B.S.P. (.518)	-	.807	20.50	.567	14.40	.060	1.53
MB1127-706	5/8	16	.997	25.33	.677	17.20	.060	1.53
MB1127-707	3/8 B.S.P. (.656)	-	.934	23.72	.707	17.96	.060	1.53
MB1127-708	3/4	18	1.055	26.80	.805	20.45	.080	2.03
MB1127-709	13/16 & 1/2 B.S.P. (.825)	20	1.120	28.45	.885	22.48	.080	2.03
MB1127-710	7/8 & 3/8 B.S.P. (.902)	22/24	1.245	31.63	.960	24.38	.080	2.03
MB1127-711	1 & 3/4 B.S.P. (1.041)	27	1.370	34.80	1.120	28.45	.080	2.03
MB1127-712	13/16 & 7/8 B.S.P. (1.189)	30	1.495	37.98	1.255	31.88	.080	2.03
MB1127-713	15/16 & 1 B.S.P. (1.309)	33	1.680	42.67	1.380	35.05	.080	2.03
MB1127-716	15/8 & 11/4 B.S.P. (1.650)	42	2.057	52.25	1.680	42.67	.080	2.03

## BARLON

Nylon Captive Washers



A nylon captive sealing washer for screwed assemblies, suitable for applications of 200 lbf/in<sup>2</sup> working pressure.

- ✦ Easily pre-assembled and stored with components
- ✦ Much lighter than traditional copper washers
- ✦ Excellent mechanical properties
- ✦ Extremely durable
- ✦ Resistant to oils and fuels
- ✦ Not prone to electrolytic corrosion

Widely used in the motor industry and particularly suitable for use on sumps, gearboxes, axles and drain plugs. Not recommended for use in temperatures over 100°C.

# SEALING WASHER KITS



A comprehensive range of quality sealing washer kits, imperial and metric, in a variety of materials available

## Bonded Washers

**MBK-45** Imperial

(Range included: from 1/8" BSP to 1" BSP)

**MBMK-45** Metric

(Range included: from 8mm to 24mm)

## Fibre Washers

**MBFWK-1** Imperial

(Range included: from 1/8" BSP to 1" BSP)

## Self-Centralising Bonded Washers

**MBSCK-45** Imperial

**MBSCMK-45** Metric

## Copper Washers

**MBCWK-1** Imperial

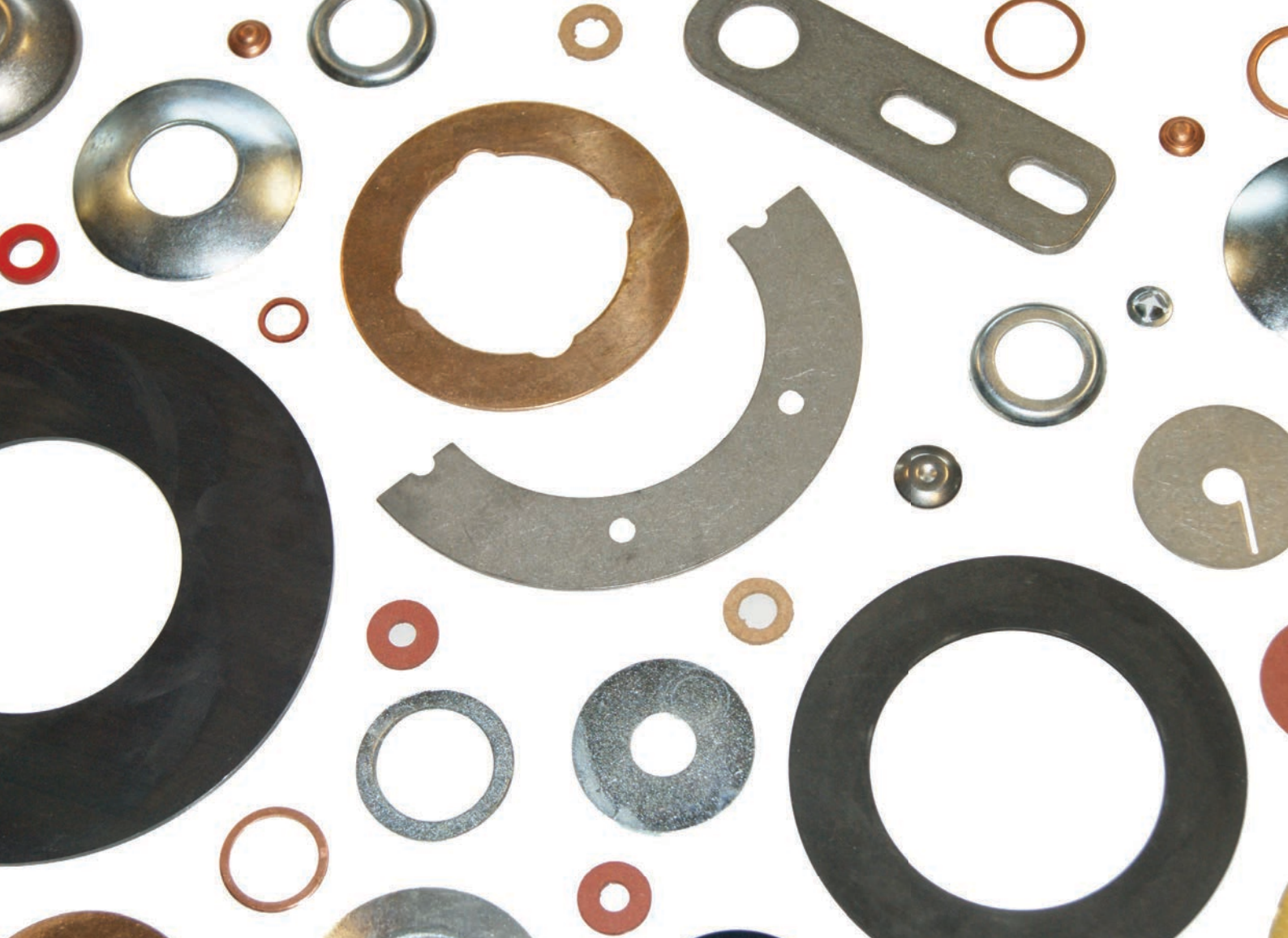
(Range included: from 1/8" BSP to 1" BSP)

**MBCWK-2** Metric

(Range included: from M8 to M22)



Barnwell supplies many other types of sealing kits. Please ask for our 'Selection Kit Booklet', speak to our staff at any of our 5 locations nationwide, or visit our website at [www.barnwell.co.uk](http://www.barnwell.co.uk)



HIGH QUALITY PRODUCTS | WRAS APPROVED SEALS | UNRIVALED SERVICE

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Smethwick  
West Midlands  
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