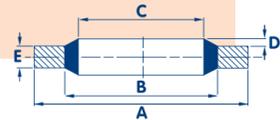
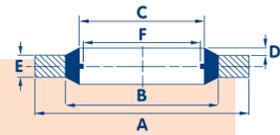


## Standard Range British Imperial



PLAIN



SELF-CENTRALISING

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

REFERENCE	SIZE (INCHES)		A	B	C	D	E	F	APPROX BURST PRESSURE (BAR)
	BSP	BOLT	+0.13 -0.00	+0.10 -0.10	+0.10 -0.10				
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		2.03	11.45	1550
MB45-010	-	9/16	22.23	16.39	14.86			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		2.50	20.20	1275
MB45-027	3/4	1.0	34.93	28.53	27.05			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		3.38	29.50	700
MB45-017	-	1.1/2	47.75	42.04	38.96			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		3.38	43.60	780
MB45-034	1.3/4	2.1/8	69.85	58.30	54.89			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

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

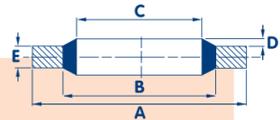
## Standard Materials

Bonded washers are available in the following standard materials:

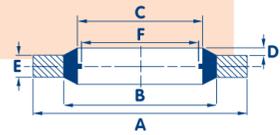
- Nitrile
- HNBR
- Viton™
- EPDM
- Mild Steel
- Zinc Plated
- Clear Passivate
- Gold Passivate
- Stainless Steel
- Aluminium

Information on non-standard materials is available on request.

## German Metric Range Metric threads to ISO R261 BS3643



PLAIN



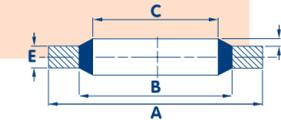
SELF-CENTRALISING

WHEN ORDERING  
SELF-CENTRALISING BONDED WASHERS  
ADD SC TO BARNWELL REFERENCE,  
EG MBSC45-204

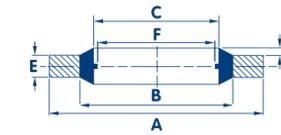
REFERENCE	THREAD SIZE	A	B	C	D	E	F	APPROX BURST PRESSURE (BAR)
		+0.13 -0.00	+0.10 -0.10	+0.10 -0.10				
MB45-201*	3.5	7.20	5.20	4.10			-	1600
MB45-202	4	7.00	5.40	4.50			3.40	1250
MB45-203	5	9.00	6.80	5.70			4.50	1400
MB45-204	5	10.00	7.40	5.70		1.00	4.50	1500
MB45-205	5.5	9.20	7.20	6.20			4.70	1220
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

\*Washers not available in Self-Centralling.

## French Metric Range Metric threads to ISO R261 BS3643



PLAIN



WHEN ORDERING  
SELF-CENTRALISING BONDED WASHERS  
ADD SC TO BARNWELL REFERENCE,  
EG MBSC45-304

REFERENCE	THREAD SIZE	A	B	C	D	E	F	APPROX BURST PRESSURE (BAR)
		+0.13 -0.00	+0.10 -0.10	+0.10 -0.10				
MB45-301*	3	7.50	5.00	3.60			-	1950
MB45-302	4	9.00	6.00	4.60			3.40	2000
MB45-303	5	10.00	7.00	5.60		1.00	4.50	1780
MB45-304	6	11.00	8.00	6.60			4.70	1680
MB45-305*	6	13.27	8.00	6.85		1.30	-	1970
MB45-306	6	11.40	8.40	7.00	0.30		4.70	1540
MB45-307	8	13.00	10.00	8.60		1.00	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			11.38	1370
MB45-317	16	23.00	18.10	16.70	0.30		13.41	1240
MB45-318	17	23.70	18.80	17.40			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			34.10	950
MB45-335	42	54.00	45.60	43.00		2.50	36.50	890
MB45-336	45	57.00	48.60	46.00		-0.15	39.50	860
MB45-337	48	60.0						