

## 12:14 The Product Range

### Individual products:

#### Initial selection

To help a designer make an initial selection this page detail the main characteristics and advantages of the different bearing products along with a brief description. More detailed technical information is given in the sections devoted to each specific bearing material.

BU is a metal backed, PTFE (polytetrafluoroethylene) and lead lined, composite bearing material designed to operate without lubrication at temperatures between  $-200^{\circ}\text{C}$  and  $+280^{\circ}\text{C}$ . It can be loaded up to  $2250\text{N}/\text{mm}^2$ , dependent on conditions.

BU resists most solvents and many industrial liquids and gas including water and oil, most of which improve its performance. It has negligible "stick-slip", is tolerant of dusty environments, and does not accumulate static electricity.

During normal operation, a thin film from the PTFE lining is transferred to the opposing surface and maintained there throughout the working life of the bearing. Therefore, DU bushes cannot be bored, broached or burnished to size after installation unless the application is such that a considerable reduction in the performance of the material can be tolerated. BU is available from stock in the form of wrapped bushes, thrust washers, or strip. The metal backing material is normally mild steel, but a bronze backed version, identified as BU(B), is available where corrosion resistance is important.

BU can be produced without the incorporation of lead into the PTFE lining. In this form the material is identified as DP and is intended for applications where the possible contamination of food products by the lead in BU is unacceptable and for lubricated applications where the lead in BU may be subject to corrosive attack.

BX is a steel backed, acetal co-polymer lined, composite bearing material designed for marginally lubricated operation and is particularly suitable where continuous oil lubrication is uneconomic or inappropriate.

The bearing surface may be supplied indented for grease lubrication or it may be plain for applications where fluid lubrication is available. The indented material surface which should be filled with suitable grease during assembly is designed to provide optimum distribution of the lubricant over the bearing surface. Dependent on conditions, BX can withstand temperatures from  $-40^{\circ}\text{C}$  up to  $130^{\circ}\text{C}$  for short periods and specific loads up to  $140\text{N}/\text{mm}^2$ .

BX is available from stock in the form of wrapped bushes, thrust washers and strip. The wrapped bushes are available in pre-finished or machinable form. The latter may be bored, reamed or broached to size after installation.

## 12:14 The Product Range

### Bearings from composite materials

The BU and BX bearings all consist of a composite material in which porous bronze layer is bonded to a metal backing and impregnated and lined with a polymer surface. It is the choice of this polymer which imparts to each material its particular bearing properties.

The metal backing provides an underlying strength, while the bronze interlayer provides a strong mechanical band for the polymer lining, and promotes dimensional stability. It also improves thermal conductivity, thereby reducing temperatures at the bearing surface.

### Inch size bearings

As well as metric size ranges the various types of BU bearings are also available in inch sizes. These are listed in the appropriate size tables.

As inch size bearings are principally for customers replacing existing inch size components, no design information relating to them is given. If design is required for an application where inch size bearings are to be specified it is recommended that this be carried out using metric loads and dimensions converting to and from inch dimensions where necessary.

Help is available from BTL-UK if required.

### Wrapped bushes

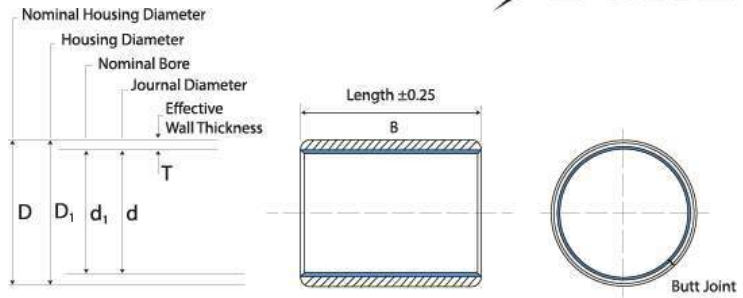
BU bearings are only available in pre-finished form with an unindented finish. BX are available both in pre-machined and machinable form. A standard range of flanged BU bushes is available in metric sizes.

Oil holes are standard in all BX bearings in the MB range and in bearings above 8mm diameter and up to and including 125mm diameter in the PM range.

As well as the standard and standard stock products, wrapped bushes may be custom made to order up to a maximum size of 1000mm bore x 190mm long.

As some sizes are preferred to others, designs are advised to contact BTL-UK before finalising on the size of larger bearings.

# BU Metric Range Bushes



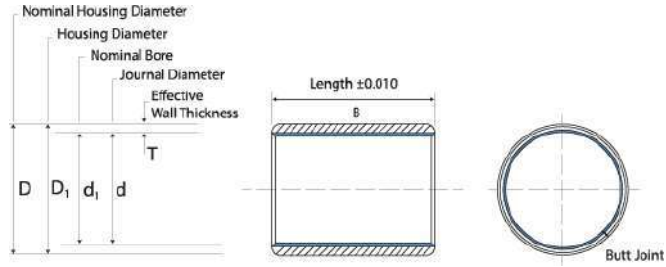
$d_1$	D	d	$D_1$	T					B							
2	3.5	2.000 1.994	3.500 3.508		3	MB 0203BU	5	MB 0205BU								
3	4.5	3.000 2.994	4.500 4.508	0.750 0.730	3	MB 0303BU	5	MB 0305BU	6	MB 0306BU						
4	5.5	4.000 3.992	5.500 4.508		3	MB 0403BU	4	MB 0404BU	6	MB 0406BU	10	MB 0410BU				
5	7	4.990 4.978	7.000 7.015		5	MB 0505BU	8	MB 0508BU	10	MB 0510BU						
6	8	5.990 5.978	8.000 8.015		6	MB 0606BU	8	MB 0608BU	10	MB 0610BU						
7	9	6.987 6.972	9.000 9.015		10	MB 0710BU										
8	10	7.987 7.972	10.000 10.015		8	MB 0808BU	10	MB 0810BU	12	MB 0812BU						
10	12	9.987 9.972	12.000 12.018		8	MB 1008BU	10	MB 1010BU	12	MB 1012BU	15	MB 1015BU	20	MB 1020BU		
12	14	11.984 11.966	14.000 14.018	1.005	8	MB 1208BU	10	MB 1210BU	12	MB 1212BU	15	MB 1215BU	20	MB 1220BU	25	MB 1225BU
13	15	12.984 12.966	15.000 15.018	0.980	10	MB 1310BU	20	MB 1320BU								
14	16	13.984 13.966	16.000 16.018		5	MB 1405BU	10	MB 1410BU	12	MB 1412BU	15	MB 1415BU	20	MB 1420BU	25	MB 1425BU
15	17	14.984 14.966	17.000 17.018		10	MB 1510BU	12	MB 1512BU	15	MB 1515BU	20	MB 1520BU	25	MB 1525BU		
16	18	15.984 15.966	18.000 18.018		10	MB 1610BU	12	MB 1612BU	15	MB 1615BU	20	MB 1620BU	25	MB 1625BU		
17	19	16.984 16.966	19.000 19.021		20	MB 1720BU										
18	20	17.984 17.966	20.000 20.021		15	MB 1815BU	20	MB 1820BU	25	MB 1825BU						
20	23	19.980 19.959	23.000 23.021		10	MB 2010BU	15	MB 2015BU	20	MB 2020BU	25	MB 2025BU	30	MB 2030BU		
22	25	21.980 19.959	25.000 25.021		15	MB 2215BU	20	MB 2220BU	25	MB 2220BU	30	MB 2230BU				
24	27	23.980 23.959	27.000 27.021		15	MB 2415BU	20	MB 2420BU	25	MB 2425BU	30	MB 2430BU				
25	28	24.980 24.959	28.000 28.021		15	MB 2515BU	20	MB 2520BU	25	MB 2525BU	30	MB 2530BU	50	MB 2550BU		
28	32	27.980 27.959	32.000 32.025		15	MB 2815BU	20	MB 2820BU	25	MB 2825BU	30	MB 2830BU				
30	34	29.980 29.959	34.000 34.025		15	MB 3015BU	20	MB 3020BU	25	MB 3025BU	30	MB 3030BU	40	MB 3040BU		
32	36	31.975 31.950	36.000 36.025	2.005	20	MB 3220BU	30	MB 3230BU	40	MB 3240BU						
35	39	34.975 34.950	39.000 39.025	1.970	20	MB 3520BU	30	MB 3530BU	35	MB 3535BU	40	MB 3540BU	50	MB 3550BU		
37	41	36.975 36.950	41.000 41.025		20	MB 3720BU										
40	44	39.975 39.950	44.000 44.025		20	MB 4020BU	30	MB 4030BU	40	MB 4040BU	50	MB 4050BU				
45	50	44.975 44.950	50.000 50.025		20	MB 4520BU	30	MB 4530BU	40	MB 4540BU	45	MB 4545BU	50	MB 4550BU		
50	55	49.975 49.950	55.000 55.030		20	MB 5020BU	30	MB 5030BU	40	MB 5040BU	50	MB 5050BU	60	MB 5060BU		
55	60	54.970 54.940	60.000 60.030	2.505 2.460	20	MB 5520BU	25	MB 5525BU	30	MB 5530BU	40	MB 5540BU				
											50	MB 5550BU	55	MB 5555BU	60	MB 5560BU
60	65	59.970 59.940	65.000 65.030		20	MB 6020BU	30	MB 6030BU	40	MB 6040BU	60	MB 6060BU	70	MB 6070BU		

# BU Metric Range Bushes



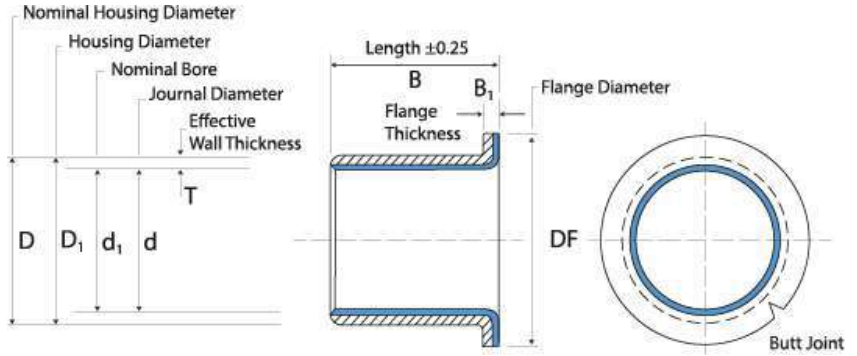
$d_1$	D	d	$D_1$	T							B
65	70	64.970 64.970	70.000 70.030		30	MB 6530BU	50	MB 6550BU	70	MB 6570BU	
70	75	69.970 69.940	75.000 75.030	2.505 2.460	40	MB 7040BU	50	MB 7050BU	70	MB 7070BU	
75	80	74.970 74.940	80.000 80.030		60	MB 7560BU	80	MB 7580BU			
80	85	80.000 79.954	85.000 85.035		60	MB 8060BU	100	MB 80100BU			
85	90	85.000 84.946	90.000 90.035		30	MB 8530BU	60	MB 8560BU	100	MB 85100BU	
90	95	90.000 89.946	95.000 95.035		60	MB 9060BU	100	MB 90100BU			
95	100	95.000 94.946	100.000 100.035	2.490	60	MB 9560BU	100	MB 95100BU			
100	105	100.000 99.946	105.000 105.035	2.440	60	MB 10060BU	115	MB 100115BU			
105	110	105.000 104.946	110.000 110.035		60	MB 10560BU	115	MB 105115BU			
110	115	110.000 109.946	115.000 115.035		60	MB 11060BU	115	MB 110115BU			
115	120	115.000 114.946	120.000 120.035		50	MB 11550BU	70	MB 11570BU			
120	125	120.000 119.946	125.000 125.040		50	MB 12050BU	60	MB 12060BU	100	MB 120100BU	
125	130	125.000 124.937	130.000 130.040		100	MB 125100BU					
130	135	130.000 129.937	135.000 135.040		60	MB 13060BU	100	MB 130100BU			
135	140	135.000 134.937	140.000 140.040		60	MB 13560BU	80	MB 13580BU			
140	145	140.000 139.937	145.000 145.040		60	MB 14060BU	100	MB 140100BU			
150	155	150.000 149.937	155.000 155.040		60	MB 15060BU	80	MB 15080BU	100	MB 150100BU	
160	165	160.000 159.937	165.000 165.040		80	MB 16080BU	100	MB 160100BU			
170	175	170.000 169.937	175.000 175.040								
180	185	180.000 179.937	185.000 185.046		100	MB 180100BU					
190	195	190.000 189.928	195.000 195.046								
200	205	200.000 199.928	205.000 205.046		100	MB 200100BU					
210	215	210.000 209.928	215.000 215.046		100	MB 210100BU					
220	225	220.000 219.928	225.000 225.046	2.465 2.415	100	MB 220100BU					
230	235	230.000 229.928	235.000 235.046								
240	245	240.000 239.928	245.000 245.046								
250	255	250.000 249.928	255.000 255.052		100	MB 250100BU					
260	265	260.000 259.919	265.000 265.052								
270	275	270.000 269.919	275.000 275.052								
280	285	280.000 279.919	285.000 285.052								
290	295	290.000 289.919	295.000 295.052								
300	305	300.000 299.919	305.000 305.052		100	MB 300100BU					
320	325	319.938 319.849	325.000 325.057								
340	345	339.938 339.849	345.000 345.057								
360	365	359.938 359.849	365.000 365.057								
380	385	379.938 379.849	385.000 385.057								
400	405	399.938 399.849	405.000 405.059								

# BU Inch Range Bushes



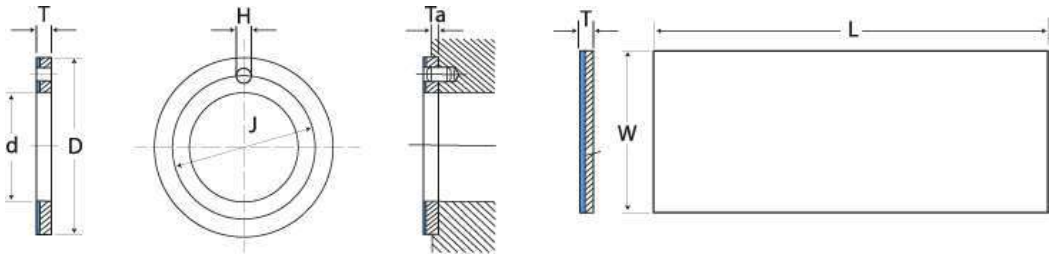
$d_1$	D	d	$D_1$	T			B					
1/8	3/16	0.1243 0.1236	0.1873 0.1878		1/8	02DU02	3/16	02DU03				
5/32	7/32	0.1554 0.1547	0.2186 0.2191		5/32	025DU025	1/4	025DU04				
3/16	1/4	0.1865 0.1858	0.2497 0.2503	0.0315 0.0305	3/16	03DU03	1/4	03DU04	3/8	03DU06		
1/4	5/16	0.2490 0.2481	0.3122 0.3128		1/4	04DU04	3/8	04DU06				
5/16	3/8	0.3115 0.3106	0.3747 0.3128		3/8	05DU06	1/2	05DU08				
3/8	15/32	0.3740 0.3731	0.4684 0.4691		3/8	06DU06	1/2	06DU06	1/2	06DU12		
7/16	17/32	0.4365 0.4355	0.5309 0.5316		1/2	07DU08	3/4	07DU12				
1/2	19/32	0.4990 0.4980	0.5934 0.5941	1.0471	3/8	08DU06	1/2	08DU08	5/8	08DU10	3/8	08DU14
9/16	21/32	0.5615 0.5605	0.6559 0.6566	0.0461	1/2	09DU08	3/4	09DU12				
5/8	23/32	0.6240 0.6230	0.7184 0.7192		1/2	10DU08	5/8	10DU10	3/4	10DU12	7/8	10DU14
11/16	25/32	0.6865 0.6855	0.7809 0.7817		7/8	11DU14						
3/4	7/8	0.7491 0.7479	0.8747 0.8755		1/2	12DU08	3/4	12DU08	1	12DU16		
7/8	1	0.8741 0.8729	0.9997 1.0005	0.0627 0.0615	3/4	14DU12	7/8	14DU14	1	14DU16		
1	1 1/8	0.9991 0.9979	1.1246 1.1256		3/4	16DU12	1	16DU16	1 1/2	16DU24		
1 1/8	1 9/32	1.1238 1.1226	1.2808 1.2818		3/4	18DU12	1	18DU16				
1 1/4	1 13/32	1.2488 1.2472	1.4058 1.4068		3/4	20DU12	1	20DU16	1 1/4	20DU20	1 3/4	20DU28
1 3/8	1 17/32	1.3738 1.3722	1.5308 1.5318	0.0784 0.0770	1	22DU16	1 3/8	22DU22	1 3/4	22DU28		
1 1/2	1 21/32	1.4988 1.4972	1.6558 1.6568		1	24DU16	1 1/4	24DU20	1 1/2	24DU24	2	24DU32
1 5/8	1 25/32	1.6238 1.6222	1.7808 1.7818		1	26DU16	1 1/2	26DU24				
1 3/4	1 15/16	1.7487 1.7471	1.9371 1.9381		1	28DU16	1 1/2	28DU24	1 3/4	28DU28	2	28DU32
1 7/8	2 1/16	1.8737 1.8721	2.0621 2.0633	0.0941 0.0923	1	30DU16	1 7/8	30DU30	2 1/4	30DU36		
2	2 3/16	1.9987 1.9969	2.1871 2.1883		1	32DU16	1 1/2	32DU24	2	32DU32	2 1/2	32DU40
2 1/4	2 7/16	2.2507 2.2489	2.4365 2.4377		2	36DU32	2 1/4	36DU36	2 1/2	36DU40	3	36DU48
2 1/2	2 11/16	2.5011 2.4993	2.6869 2.6881		2	40DU32	2 1/4	40DU40	3	40DU48	3 1/2	40DU56
2 3/4	2 15/16	2.7500 2.7482	2.9358 2.9370		2	44DU32	2 1/2	44DU40	3	44DU48	3 1/2	44DU56
3	3 3/16	3.0000 2.9982	3.1858 3.1872		2	48DU32	3	48DU48	3 3/4	48DU60		
3 1/2	3 11/16	3.5000 3.4978	3.6858 3.6872	0.0928 0.0902	2 1/2	56DU40	3	56DU48	3 3/4	56DU60		
4	4 3/16	4.0000 3.9978	4.1858 4.1872		3	64DU48	3 3/4	64DU60	4 3/4	64DU76		
5	5 3/16	4.9986 4.9961	5.1844 5.1860		3	80DU48	3 3/4	80DU60				
6	6 3/16	6.0000 5.9975	6.1858 6.1874		3	96DU48	3 3/4	96DU60				
7	7 3/16	6.9954 6.9929	7.1812 7.1830		3 3/4	112DU60						

# BU Inch Range Flange Bushes



d <sub>1</sub>	D	DF	d	D <sub>1</sub>	B <sub>1</sub>	T		B		B				
6	8	12	5.990 5.978	8.015 8.000			4	FMB 0604BU	8	FMB 0608BU				
8	10	15	7.987 7.972	10.015 10.000			5.5	FMB 0805.5BU	7.5	FMB 0807.5BU	9.5	FMB 0809.5BU		
10	12	18	9.987 9.972	12.018 12.000			7	FMB 1007BU	9	FMB 1009BU	12	FMB 1012BU	17	FMB 1017BU
12	14	20	11.984 11.966	14.018 14.000	1.00	1.005	7	FMB 1207BU	9	FMB 1209BU	12	FMB 1212BU	17	FMB 1217BU
14	16	22	13.984 13.966	16.018 16.000				FMB 1412BU	17	FMB 1417BU				
15	17	23	14.984 14.966	17.018 17.000			9	FMB 1509BU	12	FMB 1512BU	17	FMB 1517BU		
16	18	24	15.984 15.966	18.018 18.000			12	FMB 1612BU	17	FMB 1617BU				
18	20	26	17.984 17.966	20.021 20.000			12	FMB 1812BU	17	FMB 1817BU	22	FMB 1822BU		
20	23	30	19.980 19.959	23.021 23.000	1.50	1.505	11.5	FMB 2011.5BU	16.5	FMB 2016.5BU	21.5	FMB 2021.5BU		
25	28	35	24.980 24.959	28.021 28.000	1.30	1.475	11.5	FMB 2511.5BU	16.5	FMB 2516.5BU	21.5	FMB 2521.5BU		
30	34	42	29.980 29.959	34.025 34.000	2.00	2.005	16	FMB 3016BU	26	FMB 3026BU				
35	39	47	34.975 34.950	39.025 39.000	1.80	1.970	16	FMB 3516BU	26	FMB 3526BU				
40	44	52	39.975 39.950	44.025 44.000			16	FMB 4016BU	26	FMB 4026BU				

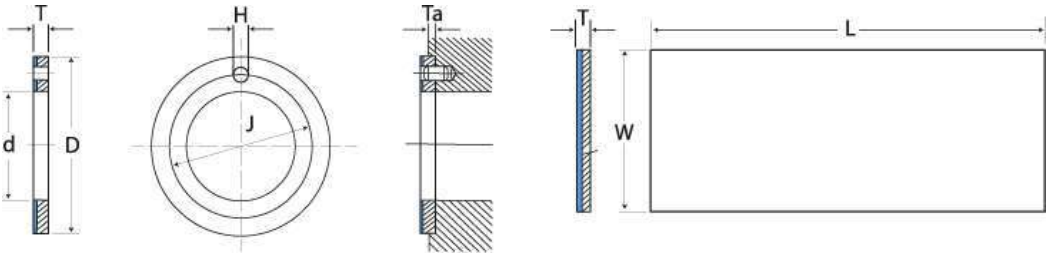
## BU Thrust Washers and Strip Metric



Part No.	d	D	T	H	J	Ta
WC08BU	10.00	20.00	1.50	no hole		0.95
	10.25	19.75	1.45			1.20
WC10BU	12.00	10.00	1.50	1.625	18.12	0.95
	12.25	10.25	1.45	1.875	17.88	1.20
WC12BU	14.00	26.00	1.50	2.125	20.12	0.95
	14.25	25.75	1.45	2.375	19.88	1.20
WC14BU	16.00	30.00	1.50	2.125	22.12	0.95
	16.25	29.75	1.45	2.375	21.88	1.20
WC16BU	18.00	32.00	1.50	2.125	25.12	0.95
	18.25	31.75	1.45	2.375	24.88	1.20
WC18BU	20.00	36.00	1.50	3.125	28.12	0.95
	20.25	35.75	1.45	3.375	27.88	1.20
WC20BU	22.00	38.00	1.50	3.125	30.12	0.95
	22.25	37.75	1.45	3.375	29.88	1.20
WC22BU	24.00	42.00	1.50	3.125	33.12	0.95
	24.25	41.75	1.45	3.375	32.88	1.20
WC24BU	26.00	44.00	1.50	3.125	35.12	0.95
	26.25	43.75	1.45	3.375	34.88	1.20
WC25BU	28.00	48.00	1.50	4.125	38.12	0.95
	28.25	47.75	1.45	4.375	37.88	1.20
WC30BU	32.00	54.00	1.50	4.125	43.12	0.95
	32.25	53.75	1.45	4.375	42.88	1.20
WC35BU	38.00	62.00	1.50	4.125	50.12	0.95
	38.25	61.75	1.45	4.375	49.88	1.20
WC40BU	42.00	66.00	1.50	4.125	54.12	0.95
	42.25	65.75	1.45	4.375	53.88	1.20
WC45BU	48.00	74.00	2.00	4.125	61.12	1.45
	48.25	73.75	1.95	4.375	60.88	1.70
WC50BU	52.00	78.00	2.00	4.125	65.12	1.45
	52.25	77.75	1.95	4.375	64.88	1.70
WC60BU	62.00	90.00	2.00	4.125	76.12	1.45
	62.25	89.75	1.95	4.375	75.88	1.70

METRIC SIZES		
In Lengths (L) of approx. 460mm		
Group No.	T mm	W mm
0M	0.70-0.74	70
1M	1.10-1.13	100
2M	1.49-1.53	100
3M	1.88-1.92	100
4M	2.28-2.32	100
5M	3.03-3.07	100

## BU Thrust Washers and Strip Inch

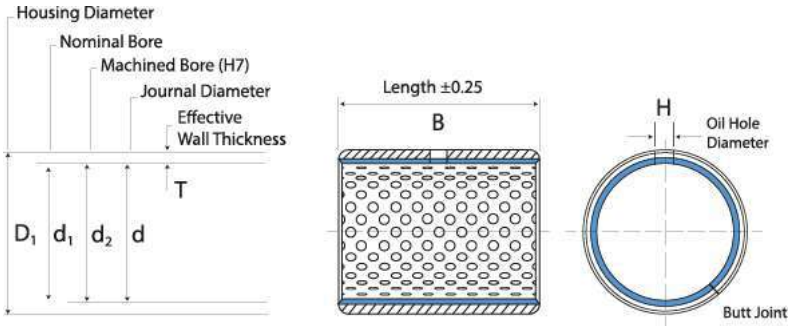


Part No.	d	D	T	H	J	Ta
BU06	0.500	0.875	0.063	0.067	0.692	0.040
	0.510	0.865	0.061	0.077	0.682	0.050
BU07	0.562	1.000	0.063	0.067	0.786	0.040
	0.572	0.990	0.061	0.077	0.776	0.050
BU08	0.625	1.125	0.063	0.099	0.880	0.040
	0.635	1.115	0.061	0.109	0.870	0.050
BU09	0.687	1.187	0.063	0.099	0.942	0.040
	0.697	1.177	0.061	0.109	0.932	0.050
BU10	0.750	1.250	0.063	0.099	1.005	0.040
	0.760	1.240	0.061	0.109	0.995	0.050
BU11	0.812	1.375	0.063	0.099	1.099	0.040
	0.822	1.365	0.061	0.109	1.089	0.050
BU12	0.875	1.500	0.063	0.130	1.192	0.040
	0.885	1.490	0.061	0.140	1.182	0.050
BU14	1.000	1.750	0.063	0.130	1.380	0.040
	1.010	1.740	0.061	0.140	1.370	0.050
BU16	1.125	2.000	0.063	0.161	1.567	0.040
	1.135	1.990	0.061	0.171	1.557	0.050
BU18	1.250	2.125	0.063	0.161	1.692	0.040
	1.260	2.115	0.061	0.171	1.682	0.050
BU20	1.375	2.250	0.063	0.161	1.817	0.040
	1.385	2.240	0.061	0.171	1.807	0.050
BU22	1.500	2.500	0.063	0.192	2.005	0.040
	1.510	2.490	0.061	0.202	1.995	0.050
BU24	1.625	2.625	0.063	0.192	2.130	0.040
	1.635	2.615	0.061	0.202	2.120	0.050
BU26	1.750	2.750	0.063	0.192	2.255	0.040
	1.760	2.740	0.061	0.202	2.245	0.050
BU28	2.000	3.000	0.093	0.192	2.505	0.070
	2.010	2.990	0.091	0.202	2.495	0.080
BU30	2.125	3.125	0.093	0.192	2.630	0.070
	2.135	3.115	0.091	0.202	2.620	0.080
BU32	2.250	3.250	0.093	0.192	2.755	0.070
	2.260	2.240	0.091	0.202	2.745	0.080

INCH SIZES In Lengths (L) of 18inch		
Group No.	T in	W in
0	0.0277-0.0293	2.75
1	0.0431-0.0447	4.0
2	0.0586-0.0602	4.0
3	0.0740-0.0756	4.0
4	0.0897-0.0913	4.0
5	0.1190-0.1210	4.0

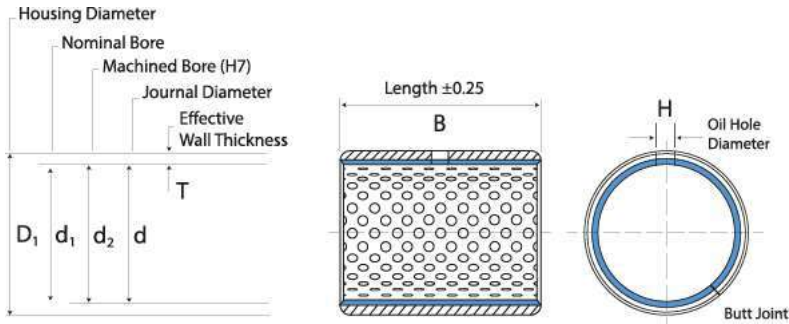


# BX Machinable Metric (MB) Range Bushes



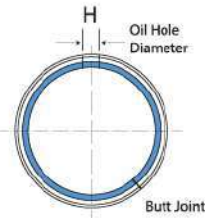
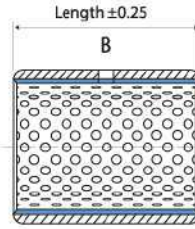
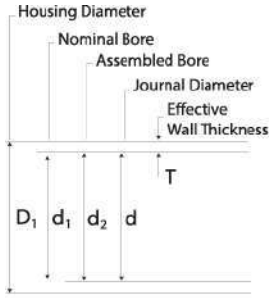
$d_1$	$D_1$	T	$d_2$	d	H	B											
8	10.000 10.015		8.000 8.015	7.960 7.938	No Hole	8*	MB 0808BX	10*	MB 0810BX	12*	MB 0812BX						
10	12.000 12.018		10.000 10.015	9.960 9.938	4	10	MB 1010BX	12	MB 1012BX	15	MB 1015BX	20	MB 1020BX				
12	14.000 14.018		12.000 12.018	12.000 12.018	4	10	MB 1210BX	12	MB 1212BX	15	MB 1215BX	20	MB 1020BX	25	MB 1225BX		
14	16.000 16.018	1.108 1.082	14.000 14.018	14.000 14.018	4	15	MB 1415BX	20	MB 1420BX	25	MB 1425BX						
15	17.000 17.018		15.000 15.018	15.000 15.018	4	10	MB 1510BX	12	MB 1512DX	15	MB 1515BX	25	MB 1425BX				
16	18.000 18.018		16.000 16.018	15.950 15.923	4	15	MB 1615BX	20	MB 1620DX	25	MB 1625BX						
18	20.000 20.021		18.000 18.018	17.950 17.923	4	15	MB 1815BX	20	MB 1820BX	25	MB 1825BX						
20	23.000 23.021		20.000 20.021	19.935 19.902	4	10	MB 2010BX	15	MB 2015BX	20	MB 2020BX	25	MB 2020BX	30	MB 2030BX		
22	25.000 25.021	1.608	22.000 22.021	21.935 21.902	6	15	MB 2215BX	20	MB 2220BX	25	MB 2225BX	30	MB 2230BX				
24	27.000 27.021	1.576	24.000 24.021	23.935 23.902	6	15	MB 2415BX	20	MB 2420BX	25	MB 2425BX	30	MB 2430BX				
25	28.000 28.021		25.000 25.021	24.935 24.902	6	15	MB 2515BX	20	MB 2520BX	25	MB 2525BX	30	MB 2530BX				
28	32.000 32.025		28.000 28.021	27.935 27.902	6	20	MB 2820BX	25	MB 2825BX	30	MB 2830BX						
30	34.000 34.025		30.000 30.021	29.935 29.902	6	20	MB 3020BX	30	MB 3030BX	40	MB 3040BX						
32	36.000 36.025	2.108	32.000 32.025	31.920 31.881	6	20	MB 3220BX	30	MB 3230BX	40	MB 3240BX						
35	39.000 39.025	2.072	35.000 35.025	34.920 34.881	6	20	MB 3520BX	30	MB 3530BX	50	MB 3550BX						
37	41.000 41.025		37.000 37.025	36.920 36.881	6	20	MB 3720BX										
40	44.000 44.025		40.000 40.025	39.920 39.881	8	20	MB 4020BX	30	MB 4030BX	40	MB 4040BX	50	MB 4050BX				
45	50.000 50.025		45.000 45.025	44.920 44.881	8	20	MB 4520BX	30	MB 4530BX	40	MB 4540BX	50	MB 4550BX				
50	55.000 55.030	2.634	50.000 50.025	49.920 49.881	8	40	MB 5040BX	60	MB 5060BX								
55	60.000 60.030	2.588	55.000 55.030	54.900 54.854	8	20	MB 5520BX	25	MB 5525BX	30	MB 5530BX	40	MB 5540BX	50	MB 5550BX	60	MB 5560BX
60	65.000 65.030		60.000 60.035	59.900 59.854	8	30	MB 6030BX	40	MB 6040BX	60	MB 6060BX	70	MB 6070BX				

## BX Machinable Metric (MB) Range Bushes



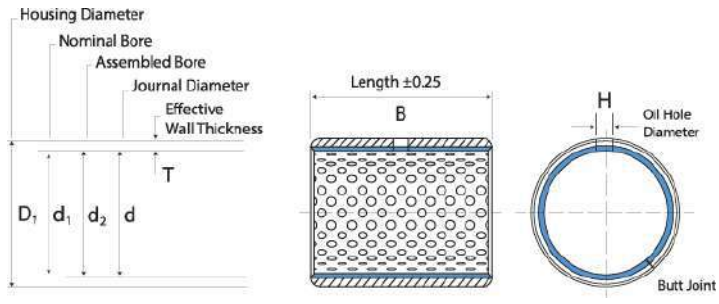
$d_1$	$D_1$	$T$	$d_2$	$d$	$H$			$B$							
65	70.000 70.030		65.000 65.030	64.900 64.854	8	40	MB 6540BX	50	MB 6550BX	60	MB 6560BX	70	MB 6570BX		
70	75.000 75.030		70.000 70.030	69.900 69.854	8	40	MB 7040BX	50	MB 7050BX	70	MB 7070BX	80	MB 7080BX		
75	80.000 80.035		75.000 75.030	74.900 79.854	9.5	40	MB 7540BX	60	MB 7560BX	80	MB 7580BX				
80	85.000 85.035		80.000 80.030	79.900 79.854	9.5	40	MB 8040BX	60	MB 8060BX	80	MB 8080BX	100	MB 80100BX		
85	90.000 90.035		85.000 85.035	84.880 84.826	9.5	30	MB 8530BX	40	MB 8540BX	60	MB 8560BX	80	MB 8580BX	100	MB 85100BX
90	95.000 95.035	2.634 2.568	90.000 90.035	89.880 89.826	9.5	40	MB 9040BX	60	MB 9060BX	90	MB 9090BX	100	MB 90100BX		
95	100.000 100.035		95.000 95.035	94.880 94.826	9.5	60	MB 9560BX	100	MB 95100BX						
100	105.000 105.035		100.000 100.035	99.880 99.826	9.5	50	MB 10050BX	60	MB 10060BX	95	MB 10095BX	115	MB 100115BX		
105	110.000 110.035		105.000 105.035	104.880 104.826	9.5	60	MB 10560BX	115	MB 105115BX						
110	115.000 115.035		110.000 110.035	109.880 109.826	9.5	60	MB 11060BX	115	MB 110115BX						
115	120.000 120.035		115.000 115.035	114.880 114.826	9.5	50	MB 11550BX	70	MB 11570BX						
120	125.000 125.040	2.634	120.000 120.035	119.880 119.826	9.5	60	MB 12060DX	100	MB 120100BX						
125	130.000 130.040	2.568	125.000 125.040	124.855 124.792	9.5	100	MB 125100BX								
130	135.000 130.040		130.000 130.040	129.855 129.792		60	MB 13060BX	100	MB 130100BX						
135	140.000 140.040	2.619	135.000 135.040	134.855 134.792	No	60	MB 13560BX	80	MB 13580BX						
140	145.000 145.000	2.564	140.040 140.040	139.855 139.792	Hole	60	MB 14060BX	100	MB 140100BX						
150	155.040 155.040		150.000 150.040	149.855 149.792		60	MB 15060BX	80	MB 15080BX	100	MB 150100BX				

## BX Pre-finished Metric (PM) Range Bushes



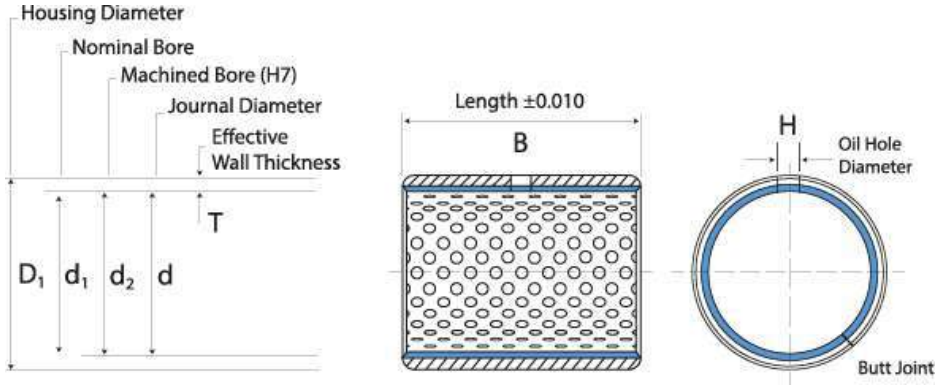
$d_1$	$D_1$	T	$d_2$	d	H			B							
8	10.000 10.015		8.040 8.107	8.000 7.978	No Hole	8*	PM 0808BX	10*	PM 0810BX	12*	PM 0812BX				
10	12.000 12.018		10.040 10.110	10.000 9.978	4	10	PM 1010BX	12	PM 1012BX	15	PM 1015BX	20	PM 1020BX		
12	14.000 14.018		12.040 12.110	12.000 11.973	4	10	PM 1210BX	12	PM 1212BX	15	PM 1215BX	20	PM 1220BX	25	PM 1225BX
14	16.000 16.018	0.980 0.954	14.040 14.110	14.000 13.973	4	15	PM 1415BX	20	PM 1420BX	25	PM 1425BX				
15	17.000 17.018		15.040 15.110	15.000 14.973	4	10	PM 1510BX	12	PM 1512BX	15	PM 1515BX	25	PM 1525BX		
16	18.000 18.018		16.040 16.110	16.000 15.973	4	15	PM 1615BX	20	PM 1620BX	25	PM 1625BX				
18	20.000 20.021		18.040 18.113	18.000 17.973	4	15	PM 1815BX	20	PM 1820BX	25	PM 2020BX				
20	23.000 23.021		20.052 22.137	20.000 19.967	4	10	PM 2010BX	15	PM 2015BX	20	PM 2020BX	25	PM 2025BX	30	PM 2030BX
22	25.000 25.021		22.052 22.137	22.000 21.967	6	15	PM 2215BX	20	PM 2220BX	25	PM 2225BX	30	PM 2230BX		
24	27.000 27.021	1.474	24.052 24.137	24.000 23.967	6	15	PM 2415BX	20	PM 2420BX	25	PM 2425BX	30	PM 2430BX		
25	28.000 28.021	1.442	25.052 25.137	25.052 25.137	6	15	PM 2515BX	20	PM 2520BX	25	PM 2525BX	30	PM 2530BX		
26															
28	31.000 31.025		28.052 28.141	28.000 27.967	6	30	PM 2830BX								
28	32.000 32.025		28.064 28.161	28.000 27.967	6	20	NTPM 2820BX	25	NTPM 2825BX	30	NTPM 2830BX				
30	34.000 34.025		30.064 30.161	30.000 29.967	6	20	PM 3020BX	30	PM 3030BX	40	PM 3040BX				
32	36.000 36.025		32.064 32.161	32.000 31.961	6	20	PM 3220BX	30	PM 3230BX	35	PM 3235BX	40	PM 3240BX		
34															
35	39.000 39.025	1.968 1.932	35.064 35.161	35.000 34.961	6	20	PM 3520BX	30	PM 3530BX	35	PM 3535BX	50	PM 3550BX		
36	40.000 40.025		36.064 36.161	36.000 35.961	6	35	PM 3635BX								
37	41.000 41.025		37.064 37.161	37.000 36.961	6	20	PM 3720BX								
38															
40	44.000 44.025		40.064 40.161	40.000 39.961	8	20	PM 4020BX	30	PM 4030BX	40	PM 4040BX	50	PM 4050BX		

# BX Pre finished Metric (PM) Range Bushes



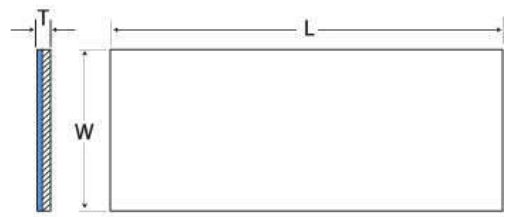
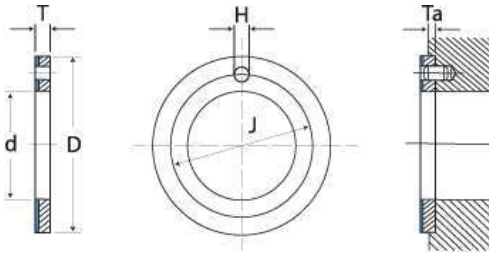
d <sub>1</sub>	D <sub>1</sub>	T	d <sub>2</sub>	d	H			B							
45	50.000 50.025		45.080 45.197	45.000 44.961	8	20	PM 4520BX	30	PM 4530BX	40	PM 4540BX	45	PM 4545BX	50	PM 4550BX
50	55.000 55.030	2.460	50.080 50.202	50.000 49.961	8	40	PM 5040BX	50	PM 5050BX	60	PM 5060BX				
55	60.000 60.030	2.414	55.080 55.202	55.000 54.954	8	20	PM 5520BX	25	PM 5525BX	30	PM 5530BX	40	PM 5540BX	50	PM 5550BX
60	65.000 65.030		60.080 60.202	60.000 59.954	8	30	PM 6030BX	40	PM 6040BX	60	PM 6060DX	70	PM 6070BX		
65	70.000 70.030		65.100 65.262	65.000 64.954	8	40	PM 6540DX	50	PM 6550BX	60	PM 6560BX	70	PM 6570BX		
70	75.000 75.030		70.100 70.262	70.000 69.954	8	40	PM 7040BX	50	PM 7050BX	65	PM 7065BX	70	PM 7070BX	80	PM 7080BX
75	80.000 80.030		75.100 75.262	75.000 74.954	9.5	40	PM 7540BX	60	PM 7560BX	80	PM 7580BX				
80	85.000 85.035		80.100 80.267	80.000 79.954	9.5	40	PM 8040BX	60	PM 8060BX	80	PM 8080BX	100	PM 80100BX		
85	90.000 90.035		85.100 85.267	85.000 84.966	9.5	30	PM 8530BX	40	PM 8540BX	60	PM 8560BX	80	PM 8580BX	100	PM 85100BX
90	95.000 95.035		90.100 90.267	90.000 89.966	9.5	40	PM 9040BX	60	PM 9060BX	80	PM 9080BX	90	PM 9090BX	100	
95	100.000 100.035		95.100 95.267	95.000 94.966	9.5	60	PM 9560BX	100	PM 95100BX						
100	105.000 105.035		100.100 100.267	100.000 99.966	9.5	50	PM 10050BX	60	PM 10060BX	80	PM 10080BX	95	PM 10095BX	115	PM 100115BX
105	110.000 110.035		105.100 105.267	105.000 104.966	9.5	60	PM 10560BX	110	PM 105110DX	115	PM 105115BX				
110	115.000 115.035		110.100 110.267	110.000 109.966	9.5	60	PM 11060BX	110	PM 110110BX	115	PM 110115BX				
115	120.000 120.035		115.100 115.267	115.000 114.966	9.5	50	PM 11550BX	70	PM 11570BX						
120	125.000 125.040		120.100 120.272	120.000 119.966	9.5	60	PM 12060BX	100	PM 120100BX	110	PM 120110BX				
125	130.000 130.040		125.100 125.272	125.000 124.937	9.5	60	PM 12560BX	100	PM 125100BX	110	PM 125110BX				
130	135.000 135.040		130.130 130.280	130.000 129.937	No Hole	50	PM 13050BX	60	PM 13060BX	80	PM 13080BX	100	PM 130100BX		
135	140.000 140.040		135.130 135.280	135.000 134.937		60	PM 13560BX	80	PM 13580BX						
140	145.000 145.040		140.130 140.280	140.000 139.937		50	PM 14050BX	60	PM 14060BX	80	PM 14080BX	100	PM 140100BX		
150	155.000 155.040		150.130 150.280	150.000 149.937		50	PM 15050BX	60	PM 15060BX	80	PM 15080BX	100	PM 150100BX		
160	165.000 165.040		160.130 160.280	160.000 159.937		50	PM 16050BX	60	PM 16060BX	80	PM 16080BX	100	PM 160100BX		
170	175.000 175.040		170.130 170.280	170.000 169.937		50	PM 17050BX	60	PM 17060BX	80	PM 17080BX	100	PM 170100BX		
180	185.000 185.046		180.130 180.286	180.000 179.937		50	PM 18050BX	60	PM 18060BX	80	PM 18080BX	100	PM 180100BX		
190	195.000 195.046	2.435 2.380	190.130 190.286	190.000 189.928		50	PM 19050BX	60	PM 19060BX	80	PM 19080BX	100	PM 190100BX	120	PM 190120BX
200	205.000 205.046		200.130 200.286	200.000 199.928		50	PM 20050BX	60	PM 20060BX	80	PM 20080BX	100	PM 200100BX	120	PM 200120BX
220	225.000 225.046		220.130 220.286	220.000 219.928		50	PM 22050BX	60	PM 22060BX	80	PM 22080BX	100	PM 220100BX	120	PM 220120BX
240	245.000 245.046		240.130 240.286	240.000 239.928		50	PM 24050BX	60	PM 24060BX	80	PM 24080BX	100	PM 240100BX	120	PM 240420BX
250	255.000 255.052		250.130 250.292	250.000 249.928		50	PM 25050BX	60	PM 25060BX	80	PM 25080BX	100	PM 250100BX	120	PM 250120BX
260	265.000 265.052		260.130 260.292	260.000 259.919		50	PM 26050BX	60	PM 26060BX	80	PM 26080BX	100	PM 260100BX	120	PM 260120BX
280	285.000 285.052		280.130 280.292	280.000 279.919		50	PM 28050BX	60	PM 28060BX	80	PM 28080BX	100	PM 280100BX	120	PM 280120BX
300	305.000 305.052		300.130 300.292	300.000 299.919		50	PM 30050BX	60	PM 30060BX	80	PM 30080BX	100	PM 300100BX	120	PM 300120BX

# BX Inch Range Bushes



$d_1$	$D_1$	$T$	$d_{min}$	$d$	$d_2$	$d$	$H$	B	
$\frac{3}{8}$	0.4687 0.4694		0.3667	0.3648 0.3639	0.3750 0.3756	0.3734 0.3725	$\frac{5}{32}$	$\frac{3}{8}$	06BX06 $\frac{1}{2}$ 06BX08 $\frac{3}{4}$ 06BX12
$\frac{7}{16}$	0.5312 0.5319		0.4292	0.4273 0.4263	0.4375 0.4382	0.4355 0.4345	$\frac{5}{32}$	$\frac{1}{2}$	07BX08 $\frac{3}{4}$ 07BX12
$\frac{1}{2}$	0.5937 0.5944	0.0510	0.4917	0.4897 0.4887	0.5000 0.5007	0.4980 0.4970	$\frac{5}{32}$	$\frac{3}{8}$	08BX06 $\frac{1}{2}$ 08BX08 $\frac{5}{8}$ 08BX10 $\frac{7}{8}$ 08BX14
$\frac{9}{16}$	0.6562 0.6569	0.0500	0.5542	0.5522 0.5512	0.5625 0.5632	0.5605 0.5595	$\frac{5}{32}$	$\frac{1}{2}$	09BX08 $\frac{3}{4}$ 09BX12
$\frac{5}{8}$	0.7187 0.7195		0.6167	0.6146 0.6136	0.6250 0.6257	0.6230 0.6220	$\frac{5}{32}$	$\frac{1}{2}$	10BX08 $\frac{5}{8}$ 10BX10 $\frac{3}{4}$ 10BX12 $\frac{7}{8}$ 10BX14
$1\frac{1}{16}$	0.7812 0.7820		0.6792	0.6770 0.6760	0.6875 0.6882	0.6855 0.6845	$\frac{5}{32}$	$\frac{7}{8}$	11BX14
$\frac{3}{4}$	0.8750 0.8758		0.7412	0.7390 0.7378	0.7500 0.7508	0.7475 0.7463	$\frac{5}{32}$	$\frac{1}{2}$	12BX08 $\frac{3}{4}$ 12BX12 <b>1</b> 12BX16
$\frac{7}{8}$	1.0000 1.0008	0.0669 0.0657	0.8662	0.8639 0.8627	0.8750 0.8758	0.8725 0.8713	$\frac{1}{4}$	$\frac{3}{4}$	14BX12 $\frac{7}{8}$ 14BX14 <b>1</b> 14BX16
<b>1</b>	1.1250 1.1258		0.9912	0.9888 0.9876	1.0000 1.0008	0.9975 0.9963	$\frac{1}{4}$	$\frac{3}{4}$	16BX12 <b>1</b> 16BX24 <b>1</b> $\frac{1}{2}$ 16BX24
<b>1</b> $\frac{1}{8}$	1.2812 1.2822		1.1164	1.1138 1.1126	1.1250 1.1258	1.1225 1.1213	$\frac{1}{4}$	$\frac{3}{4}$	18BX12 <b>1</b> 18BX16
<b>1</b> $\frac{1}{4}$	1.4062 1.4072		1.2414	1.2387 1.2371	1.2500 1.2510	1.2470 1.2454	$\frac{1}{4}$	$\frac{3}{4}$	20BX12 <b>1</b> 20BX16 <b>1</b> $\frac{1}{4}$ 20BX20 <b>1</b> $\frac{3}{4}$ 20BX28
<b>1</b> $\frac{3}{8}$	1.5312 1.5322	0.0824 0.0810	1.3664	1.3635 1.3619	1.3750 1.3760	1.3720 1.3704	$\frac{1}{4}$	<b>1</b>	22BX16 <b>1</b> $\frac{3}{8}$ 22BX22 <b>1</b> $\frac{3}{4}$ 22BX28
<b>1</b> $\frac{1}{2}$	1.6572 1.6562		1.4914	1.4914 1.4868	1.5000 1.5010	1.4970 1.4954	$\frac{5}{16}$	<b>1</b>	24BX16 <b>1</b> $\frac{1}{4}$ 24BX20 <b>1</b> $\frac{1}{2}$ 24BX24 <b>2</b> 24BX32
<b>1</b> $\frac{5}{8}$	1.7812 1.7822		1.6164	1.6133 1.6117	1.6250 1.6260	1.6220 1.6204	$\frac{5}{16}$	<b>1</b>	26BX16 <b>1</b> $\frac{1}{2}$ 26BX24
<b>1</b> $\frac{3}{4}$	1.9375 1.9385		1.7415	1.7383 1.7367	1.7500 1.7510	1.7470 1.7454	$\frac{5}{16}$	<b>1</b>	28BX16 <b>1</b> $\frac{1}{2}$ 28BX24 <b>1</b> $\frac{3}{4}$ 28BX28 <b>2</b> 28BX32
<b>1</b> $\frac{7}{8}$	2.0625 2.0637		1.8665	1.8632 1.8616	1.8750 1.8760	1.8720 1.8704	$\frac{5}{16}$	<b>1</b>	30BX16 <b>1</b> $\frac{7}{8}$ 30BX30 <b>2</b> $\frac{1}{4}$ 30BX36
<b>2</b>	2.1875 2.1887	0.0980 0.0962	1.9915	1.9881 1.9863	2.0000 2.0012	1.9960 1.9942	$\frac{5}{16}$	<b>1</b>	32BX16 <b>1</b> $\frac{1}{2}$ 32BX24 <b>2</b> 32BX32 <b>2</b> $\frac{1}{2}$ 32BX40
<b>2</b> $\frac{1}{4}$	2.4375 2.4387		2.2415	2.2378 2.2360	2.2500 2.2512	2.2460 2.2442	$\frac{5}{16}$	<b>2</b>	36BX32 <b>2</b> $\frac{1}{4}$ 36BX36 <b>2</b> $\frac{1}{2}$ 36BX40
<b>2</b> $\frac{1}{2}$	2.6875 2.6887		2.4915	2.4875 2.4857	2.5000 2.5012	2.4960 2.4942	$\frac{5}{16}$	<b>2</b>	40BX32 <b>2</b> $\frac{1}{2}$ 40BX40
<b>2</b> $\frac{3}{4}$	2.9375 2.9387		2.7393	2.7351 2.7333	2.7500 2.7512	2.7460 2.7442	$\frac{5}{16}$	<b>2</b>	44BX32 <b>2</b> $\frac{1}{2}$ 44BX40 <b>3</b> 44BX48 <b>3</b> $\frac{1}{2}$ 44BX56
<b>3</b>	3.1875 3.1889	0.0991	2.9893	2.9849 2.9831	3.0000 3.0012	2.9960 2.9942	$\frac{3}{8}$	<b>2</b>	48BX32 <b>3</b> 48BX48 <b>3</b> $\frac{3}{4}$ 48BX60
<b>3</b> $\frac{1}{2}$	3.6875 3.6889	0.0965	3.4893	3.4844 3.4822	3.5000 3.5014	3.4950 3.4928	$\frac{3}{8}$	<b>2</b> $\frac{1}{2}$	56BX40 <b>3</b> 56BX48 <b>3</b> $\frac{3}{4}$ 56BX48
<b>4</b>	4.1875 4.1889		3.9893	3.9839 3.9817	4.0000 4.0014	3.9950 3.9928	$\frac{3}{8}$	<b>3</b>	64BX48 <b>3</b> $\frac{3}{4}$ 64BX60 <b>4</b> $\frac{3}{4}$ 64BX60

# DX Thrust Washers and Strip



Part No.	d	D	T	H	J	Ta
WC10BX	12.00	24.00	1.577	1.625	18.12	0.95
	12.25	23.75	1.487	1.875	17.88	1.20
WC12BX	14.00	26.00	1.577	2.125	20.12	0.95
	14.25	25.75	1.487	2.375	19.88	1.20
WC14BX	16.00	30.00	1.577	2.125	22.12	0.95
	16.25	29.75	1.487	2.375	21.88	1.20
WC16BX	18.00	32.00	1.577	2.125	25.12	0.95
	18.25	31.75	1.487	2.375	24.88	1.20
WC18BX	20.00	36.00	1.577	3.125	28.12	0.95
	20.25	35.75	1.487	3.375	27.88	1.20
WC20BU	22.00	38.00	1.577	3.125	30.12	0.95
	22.25	37.75	1.487	3.375	29.88	1.20
WC22BU	24.00	42.00	1.577	3.125	33.12	0.95
	24.25	41.75	1.487	3.375	32.88	1.20
WC24BU	26.00	44.00	1.577	3.125	35.12	0.95
	26.25	43.75	1.487	3.375	34.88	1.20
WC25BU	28.00	48.00	1.577	4.125	38.12	0.95
	28.25	47.75	1.487	4.375	37.88	1.20
WC30BU	32.00	54.00	1.577	4.125	43.12	0.95
	32.25	53.75	1.487	4.375	42.88	1.20
WC35BU	38.00	62.00	1.577	4.125	50.12	0.95
	38.25	61.75	1.487	4.375	49.88	1.20
WC40BU	42.00	66.00	1.577	4.125	54.12	0.95
	42.25	66.75	1.487	4.375	53.88	1.20
WC45BU	48.00	74.00	2.600	4.125	61.12	1.45
	48.25	73.75	2.510	4.375	60.88	1.70
WC50BU	52.00	78.00	2.600	4.125	65.12	1.45
	52.25	77.75	2.510	4.375	64.88	1.70

METRIC SIZES		
In Lengths (L) of approx. 460mm		
Group No.	T mm	W mm
BM	1.03-1.06	70
CM	1.52-1.55	100
DM	2.02-2.05	100
EM	2.53-2.56	100

Part No.	d	D	T	H	J	Ta
BX06	0.500	0.875	0.0625	0.067	0.692	0.040
	0.510	0.865	0.0660	0.077	0.682	0.050
BX07	0.562	0.990	0.0625	0.067	0.786	0.040
	0.572	1.000	0.0660	0.077	0.776	0.050
BX08	0.625	1.125	0.0625	0.099	0.880	0.040
	0.635	1.115	0.0660	0.109	0.870	0.050
BX09	0.687	1.187	0.0625	0.099	0.942	0.040
	0.697	1.177	0.0660	0.109	0.932	0.050
BX10	0.750	1.250	0.0625	0.099	1.005	0.040
	0.760	1.240	0.0660	0.109	0.995	0.050
BX11	0.812	1.375	0.0625	0.099	1.099	0.040
	0.822	1.365	0.0660	0.109	1.089	0.050
BX12	0.875	1.500	0.0625	0.130	1.192	0.040
	0.885	1.490	0.0660	0.140	1.182	0.050
BX14	1.000	1.750	0.0625	0.130	1.380	0.040
	1.010	1.740	0.0660	0.140	1.370	0.050
BX16	1.125	2.000	0.0625	0.161	1.567	0.040
	1.135	1.990	0.0660	0.171	1.557	0.050
BX18	1.250	2.125	0.0625	0.161	1.692	0.040
	1.260	2.115	0.0660	0.171	1.682	0.050
BX20	1.375	2.250	0.0625	0.161	1.817	0.040
	1.385	2.240	0.0660	0.171	1.807	0.050
BX22	1.500	2.500	0.0625	0.192	2.005	0.040
	1.510	2.490	0.0660	0.202	1.995	0.050
BX24	1.625	2.625	0.0625	0.192	2.130	0.040
	1.635	2.615	0.0660	0.202	2.120	0.050
BX26	1.750	2.750	0.0625	0.192	2.255	0.040
	1.760	2.740	0.0660	0.202	2.245	0.050
BX28	2.000	3.000	0.0935	0.192	2.505	0.070
	2.010	2.990	0.0970	0.202	2.495	0.080
BX30	2.125	3.125	0.0935	0.192	2.630	0.070
	2.135	3.115	0.0970	0.202	2.620	0.080
BX32	2.250	3.250	0.0935	0.192	2.755	0.070
	2.260	3.240	0.0970	0.202	2.745	0.080

INCH SIZES		
In Lengths (L) of 18inch		
Group No.	T in	W in
B	0.0480-0.0492	2.75
C	0.0630-0.0642	4
D	0.0783-0.0795	4
E	0.0937-0.0949	4