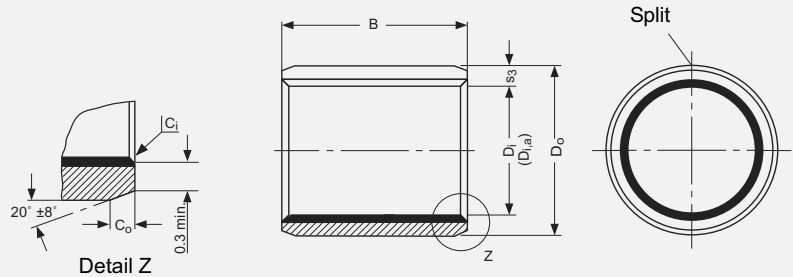


8 Standard Products

8.1 DU Cylindrical Bushes



Dimensions and Tolerances according to ISO 3547 and GSP-Specifications

All dimensions in mm

ID and OD chamfers

s ₃	C ₀	C _i	s ₃	C ₀	C _i
0.75	0.5 ± 0.3	-0.1 to -0.4	2	1.2 ± 0.4	-0.1 to -0.7
1	0.6 ± 0.4	-0.1 to -0.5	2.5	1.6 ± 0.8	-0.2 to -1.0
1.5	0.6 ± 0.4	-0.1 to -0.7			

Part No.	Nominal Diameter		Bush Wall s ₃	Length B	Shaft-∅ D _J	Housing-∅ D _H	Ass. Inside-∅ D _{i,a}	Clearance C _D																																																																																
	D _i	D _o							max. min.	max. min.	max. min.	max. min.	max. min.																																																																											
0203DU	2	3.5	0.745 0.725	3.25	2.000 1.994	3.508 3.500	2.058 2.010	0.064 0.010																																																																																
0205DU				2.75					5.25 4.75	0303DU	3	4.5	0.750 0.730	3.25	3.000 2.994	4.508 4.500	3.048 3.000	0.054 0.000	0305DU	2.75	5.25 4.75	0306DU	6.25 5.75	0403DU	4	5.5	0.750 0.730	3.25	4.000 3.992	5.508 5.500	4.048 4.000	0.056 0.000	0404DU	2.75	4.25 3.75	0406DU	6.25 5.75	0410DU	10.25 9.75	0505DU	5	7	1.005 0.980	5.25	4.990 4.978	7.015 7.000	5.055 4.990	0.077 0.000	0508DU	4.75	8.25 7.75	0510DU	10.25 9.75	0604DU	6	8	1.005 0.980	4.25	5.990 5.978	8.015 8.000	6.055 5.990	0.077 0.000	0606DU	3.75	6.25 5.75	0608DU	8.25 7.75	0610DU	10.25 9.75	0710DU	7	9		10.25 9.75	6.987 6.972	9.015 9.000	7.055 6.990	0.083 0.003	0806DU	8	10	1.005 0.980	6.25	7.987 7.972	10.015 10.000	8.055 7.990	0808DU	5.75
0303DU	3	4.5	0.750 0.730	3.25	3.000 2.994	4.508 4.500	3.048 3.000	0.054 0.000																																																																																
0305DU				2.75					5.25 4.75																																																																															
0306DU				6.25 5.75																																																																																				
0403DU	4	5.5	0.750 0.730	3.25	4.000 3.992	5.508 5.500	4.048 4.000	0.056 0.000																																																																																
0404DU				2.75					4.25 3.75																																																																															
0406DU				6.25 5.75																																																																																				
0410DU				10.25 9.75																																																																																				
0505DU	5	7	1.005 0.980	5.25	4.990 4.978	7.015 7.000	5.055 4.990	0.077 0.000																																																																																
0508DU				4.75					8.25 7.75																																																																															
0510DU				10.25 9.75																																																																																				
0604DU	6	8	1.005 0.980	4.25	5.990 5.978	8.015 8.000	6.055 5.990	0.077 0.000																																																																																
0606DU				3.75					6.25 5.75																																																																															
0608DU				8.25 7.75																																																																																				
0610DU				10.25 9.75																																																																																				
0710DU	7	9		10.25 9.75	6.987 6.972	9.015 9.000	7.055 6.990	0.083 0.003																																																																																
0806DU	8	10	1.005 0.980	6.25	7.987 7.972	10.015 10.000	8.055 7.990																																																																																	
0808DU				5.75					8.25 7.75																																																																															
0810DU				10.25 9.75																																																																																				
0812DU				12.25																																																																																				
				11.75																																																																																				

8 Standard Products

Part No.	Nominal Diameter		Bush Wall s ₃	Length B	Shaft-∅ D _J	Housing-∅ D _H	Ass. Inside-∅ D _{i,a}	Clearance C _D	
	D _i	D _o							max. min.
1008DU	10	12	1.005 0.980	8.25	9.987 9.972	12.018 12.000	10.058 9.990	0.086 0.003	
1010DU				7.75					
1012DU				10.25					
1015DU				9.75					
1020DU				12.25					
1208DU				11.75					
1210DU	15.25	12		14	8.25	11.984 11.966	14.018 14.000		12.058 11.990
1212DU	7.75								
1215DU	10.25								
1220DU	9.75								
1225DU	12.25								
1310DU	11.75								
1320DU	15.25	13		15	10.25	12.984 12.966	15.018 15.000		13.058 12.990
1405DU	9.75								
1410DU	20.25								
1412DU	19.75								
1415DU	25.25								
1420DU	24.75								
1425DU	5.25	14	16	4.75	13.984 13.966	16.018 16.000	14.058 13.990		
1450DU	10.25								
1510DU	9.75								
1512DU	12.25								
1515DU	11.75								
1520DU	15.25								
1525DU	14.75	15	17	20.25	14.984 14.966	17.018 17.000	15.058 14.990		
1610DU	19.75								
1612DU	25.25								
1615DU	24.75								
1620DU	10.25								
1625DU	9.75								
1650DU	12.25	16	18	11.75	15.984 15.966	18.018 18.000	16.058 15.990		
1720DU	15.25								
1810DU	14.75								
1815DU	20.25								
1820DU	19.75								
1825DU	25.25								
1850DU	24.75	17	19	20.25	16.984 16.966	19.021 19.000	17.061 16.990		
1920DU	19.75								
2010DU	10.25								
2015DU	9.75								
2020DU	15.25								
2025DU	14.75								
2050DU	20.25	18	20	19.75	17.984 17.966	20.021 20.000	18.061 17.990		
2120DU	25.25								
2150DU	24.75								
2220DU	10.25								
2250DU	9.75								
2320DU	15.25								
2350DU	14.75								
2420DU	20.25	19	21	19.75	18.984 18.966	21.021 21.000	19.061 18.990		
2520DU	25.25								
2550DU	24.75								
2620DU	10.25								
2650DU	9.75								
2720DU	15.25								
2750DU	14.75								
2820DU	20.25	20	22	19.75	19.984 19.966	22.021 22.000	19.061 18.990		
2920DU	25.25								
2950DU	24.75								
3020DU	10.25								
3050DU	9.75								
3120DU	15.25								
3150DU	14.75								
3220DU	20.25	21	23	19.75	20.984 20.966	23.021 23.000	19.061 18.990		
3320DU	25.25								
3350DU	24.75								
3420DU	10.25								
3450DU	9.75								
3520DU	15.25								
3550DU	14.75								
3620DU	20.25	22	24	19.75	21.984 21.966	24.021 24.000	19.061 18.990		
3720DU	25.25								
3750DU	24.75								
3820DU	10.25								
3850DU	9.75								
3920DU	15.25								
3950DU	14.75								
4020DU	20.25	23	25	19.75	22.984 22.966	25.021 25.000	19.061 18.990		
4120DU	25.25								
4150DU	24.75								
4220DU	10.25								
4250DU	9.75								
4320DU	15.25								
4350DU	14.75								
4420DU	20.25	24	26	19.75	23.984 23.966	26.021 26.000	19.061 18.990		
4520DU	25.25								
4550DU	24.75								
4620DU	10.25								
4650DU	9.75								
4720DU	15.25								
4750DU	14.75								
4820DU	20.25	25	27	19.75	24.984 24.966	27.021 27.000	19.061 18.990		
4920DU	25.25								
4950DU	24.75								
5020DU	10.25								
5050DU	9.75								
5120DU	15.25								
5150DU	14.75								
5220DU	20.25	26	28	19.75	25.984 25.966	28.021 28.000	19.061 18.990		
5320DU	25.25								
5350DU	24.75								
5420DU	10.25								
5450DU	9.75								
5520DU	15.25								
5550DU	14.75								
5620DU	20.25	27	29	19.75	26.984 26.966	29.021 29.000	19.061 18.990		
5720DU	25.25								
5750DU	24.75								
5820DU	10.25								
5850DU	9.75								
5920DU	15.25								
5950DU	14.75								
6020DU	20.25	28	30	19.75	27.984 27.966	30.021 30.000	19.061 18.990		
6120DU	25.25								
6150DU	24.75								
6220DU	10.25								
6250DU	9.75								
6320DU	15.25								
6350DU	14.75								
6420DU	20.25	29	31	19.75	28.984 28.966	31.021 31.000	19.061 18.990		
6520DU	25.25								
6550DU	24.75								
6620DU	10.25								
6650DU	9.75								
6720DU	15.25								
6750DU	14.75								
6820DU	20.25	30	32	19.75	29.984 29.966	32.021 32.000	19.061 18.990		
6920DU	25.25								
6950DU	24.75								
7020DU	10.25								
7050DU	9.75								
7120DU	15.25								
7150DU	14.75								
7220DU	20.25	31	33	19.75	30.984 30.966	33.021 33.000	19.061 18.990		
7320DU	25.25								
7350DU	24.75								
7420DU	10.25								
7450DU	9.75								
7520DU	15.25								
7550DU	14.75								
7620DU	20.25	32	34	19.75	31.984 31.966	34.021 34.000	19.061 18.990		
7720DU	25.25								
7750DU	24.75								
7820DU	10.25								
7850DU	9.75								
7920DU	15.25								
7950DU	14.75								
8020DU	20.25	33	35	19.75	32.984 32.966	35.021 35.000	19.061 18.990		
8120DU	25.25								
8150DU	24.75								
8220DU	10.25								
8250DU	9.75								
8320DU	15.25								
8350DU	14.75								
8420DU	20.25	34	36	19.75	33.984 33.966	36.021 36.000	19.061 18.990		
8520DU	25.25								
8550DU	24.75								
8620DU	10.25								
8650DU	9.75								
8720DU	15.25								
8750DU	14.75								
8820DU	20.25	35	37	19.75	34.984 34.966	37.021 37.000	19.061 18.990		
8920DU	25.25								
8950DU	24.75								
9020DU	10.25								
9050DU	9.75								
9120DU	15.25								
9150DU	14.75								
9220DU	20.25	36	38	19.75	35.984 35.966	38.021 38.000	19.061 18.990		
9320DU	25.25								
9350DU	24.75								
9420DU	10.25								
9450DU	9.75								
9520DU	15.25								
9550DU	14.75								
9620DU	20.25	37	39	19.75	36.984 36.966	39.021 39.000	19.061 18.990		
9720DU	25.25								
9750DU	24.75								
9820DU	10.25								
9850DU	9.75								
9920DU	15.25								
9950DU	14.75								

Part No.	Nominal Diameter		Bush Wall s_3	Length B	Shaft- \varnothing D _J	Housing- \varnothing D _H	Ass. Inside- \varnothing D _{i,a}	Clearance C _D
	D _i	D _o						
2010DU	20	23	1.505 1.475	10.25	19.980 19.959	23.021 23.000	20.071 19.990	0.112 0.010
2015DU				9.75				
2020DU				15.25				
2025DU				14.75				
2030DU				20.25				
2215DU	22	25		15.25	21.980 21.959	25.021 25.000	22.071 21.990	
2220DU				14.75				
2225DU				20.25				
2230DU				19.75				
2415DU				25.25				
2420DU	24	27		30.25	23.980 23.959	27.021 27.000	24.071 23.990	
2425DU				29.75				
2430DU				15.25				
2515DU				14.75				
2520DU				20.25				
2525DU	25	28	19.75	24.980 24.959	28.021 28.000	25.071 24.990		
2530DU			25.25					
2550DU			24.75					
2815DU			30.25					
2820DU			29.75					
2825DU	28	32	15.25	27.980 27.959	32.025 32.000	28.085 27.990		
2830DU			14.75					
3010DU			20.25					
3015DU			19.75					
3020DU			25.25					
3025DU	30	34	24.75	29.980 29.959	34.025 34.000	30.085 29.990		
3030DU			30.25					
3040DU			29.75					
3220DU			40.25					
3230DU			39.75					
3240DU	32	36	20.25	31.975 31.950	36.025 36.000	32.085 31.990		
3230DU			19.75					
3240DU			30.25					
3240DU			29.75					

8 Standard Products


Part No.	Nominal Diameter		Bush Wall s ₃	Length B	Shaft-∅ D _J	Housing-∅ D _H	Ass. Inside-∅ D _{i,a}	Clearance C _D
	D _i	D _o						
3520DU	35	39	2.005 1.970	20.25	34.975 34.950	39.025 39.000	35.085 34.990	0.135 0.015
3530DU				19.75				
3535DU				30.25				
3540DU				29.75				
3550DU				35.25 34.75				
3720DU	37	41		20.25	36.975 36.950	41.025 41.000	37.085 36.990	
4020DU	40	44		20.25	39.975 39.950	44.025 44.000	40.085 39.990	
4030DU				19.75				
4040DU				30.25				
4050DU				29.75				
4520DU			40.25 39.75					
4530DU	45	50	20.25	44.975 44.950	50.025 50.000	45.105 44.990		
4540DU			19.75					
4545DU			30.25					
4550DU			29.75					
5020DU			45.25 44.75					
5030DU	50	55	20.25	49.975 49.950	55.030 55.000	50.110 49.990		
5040DU			19.75					
5050DU			30.25					
5060DU			29.75					
5520DU			40.25 39.75					
5525DU	55	60	20.25	54.970 54.940	60.030 60.000	55.110 54.990		
5530DU			19.75					
5540DU			25.25					
5550DU			24.75					
5555DU			30.25					
5560DU	29.75							
6020DU	60	65	2.505 2.460	59.970 59.940	65.030 65.000	60.110 59.990		
6030DU			20.25					
6040DU			19.75					
6050DU			30.25					
6060DU			29.75					
6070DU			40.25					
			39.75					

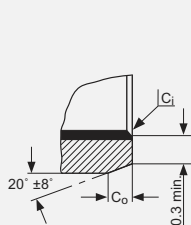
Part No.	Nominal Diameter		Bush Wall s ₃	Length B	Shaft-∅ D _J	Housing-∅ D _H	Ass. Inside-∅ D _{i,a}	Clearance C _D
	D _i	D _o						
6530DU	65	70	2.505 2.460	30.25 29.75	64.970 64.940	70.030 70.000	65.110 64.990	0.170 0.020
6550DU				50.25 49.75				
6570DU				70.25 69.75				
7040DU	70	75		40.25 39.75	69.970 69.940	75.030 75.000	70.110 69.990	
7050DU				50.25 49.75				
7070DU				70.25 69.75				
7560DU	75	80		60.25 59.75	74.970 74.940	80.030 80.000	75.110 74.990	
7580DU				80.25 79.75				
8060DU	80	85		60.50 59.50	80.000 79.954	85.035 85.000	80.155 80.020	
80100DU			100.50 99.50					
8530DU	85	90	30.50 29.50	85.000 84.946	90.035 90.000	85.155 85.020		
8560DU			60.50 59.50					
85100DU			100.50 99.50					
9060DU	90	95	60.50 59.50	90.000 89.946	95.035 95.000	90.155 90.020		
90100DU			100.50 99.50					
9560DU	95	100	60.50 59.50	95.000 94.946	100.035 100.000	95.155 95.020		
95100DU			100.50 99.50					
10050DU	100	105	50.50 49.50	100.000 99.946	105.035 105.000	100.155 100.020		
10060DU			60.50 59.50					
100115DU			115.50 114.50					
10560DU	105	110	60.50 59.50	105.000 104.946	110.035 110.000	105.155 105.020		
105115DU			115.50 114.50					
11060DU	110	115	60.50 59.50	110.000 109.946	115.035 115.000	110.155 110.020		
110115DU			115.50 114.50					
11550DU	115	120	50.50 49.50	115.000 114.946	120.035 120.000	115.155 115.020		
11570DU			70.50 69.50					
12050DU	120	125	50.50 49.50	120.000 119.946	125.040 125.000	120.210 120.070		
12060DU			60.50 59.50					
120100DU			100.50 99.50					
125100DU	125	130	100.50 99.50	125.000 124.937	130.040 130.000	125.210 125.070		
13060DU	130	135	60.50 59.50	130.000 129.937	135.040 135.000	130.210 130.070		
130100DU			100.50 99.50					

8 Standard Products

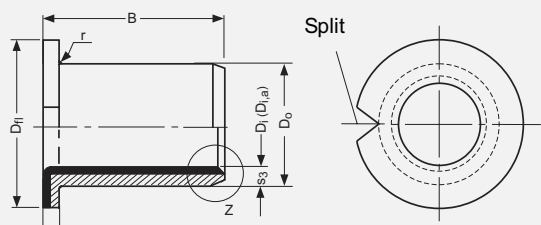
Part No.	Nominal Diameter		Bush Wall s_3	Length B	Shaft- \varnothing D_J	Housing- \varnothing D_H	Ass. Inside- \varnothing $D_{i,a}$	Clearance C_D			
	D_i	D_o							max. min.	max. min.	max. min.
13560DU	135	140	2.465 2.415	60.50	135.000	140.040	135.210	0.273 0.070			
13580DU				59.50					134.937	140.000	135.070
14060DU	140	145		60.50	140.000	145.040	140.210				
140100DU				59.50					139.937	145.000	140.070
15060DU	150	155		60.50	150.000	155.040	150.210				
15080DU				59.50					149.937	155.000	150.070
150100DU				80.50					155.000	155.000	150.070
16080DU	160	165		80.50	160.000	165.040	160.210				
160100DU				79.50					159.937	165.000	160.070
180100DU	180	185		100.50	180.000	185.046	180.216		0.279		
200100DU	200	205		99.50	179.937	185.000	180.070		0.070		
210100DU	210	215		200.000	200.000	205.046	200.216		0.288 0.070		
220100DU	220	225		199.928	205.000	205.000	200.070				
250100DU	250	255		210.000	210.000	215.046	210.216		0.294 0.070		
300100DU	300	305		209.928	215.000	215.000	210.070				
				220.000	220.000	225.046	220.216		0.303 0.070		
			219.928	225.000	225.000	220.070					
			250.000	250.000	255.052	250.222	0.294 0.070				
			249.928	255.000	255.000	250.070					
			300.000	300.000	305.052	300.222	0.303 0.070				
			299.919	305.000	305.000	300.070					

8.2 DU Flanged Bushes





Detail Z



Split

s_3	1,0	1,5	2,0	2,5
r	1 ^{-0,5}	1 ± 0,5	1,4 ± 0,5	2 ± 0,5

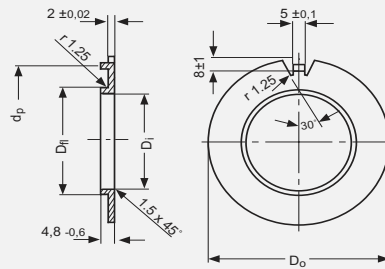
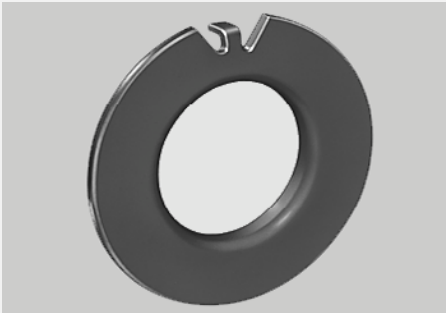
Dimensions and Tolerances according to ISO 3547 and GSP-Specifications

All dimensions in mm

Part No.	Nominal Diameter		Bush Wall s_3	Flange Wall s_{fl}	Flange- \varnothing D_{fl}	Length B	Shaft- \varnothing D_J	Housing- \varnothing D_H	Ass. Inside- \varnothing $D_{i,a}$	Clearance C_D
	D_i	D_o								
BB0304DU	3	4.5	0.750 0.730	0.800 0.700	7.500	4.25	3.000	4.508 4.500	3.048	0.054 0.000
BB0404DU					6.500		2.994		3.000	
BB0505DU	4	5.5	1.005 0.980	1.050 0.950	9.500	5.25	4.000	7.015 7.000	4.048	0.056 0.000
BB0604DU					8.500		3.992		4.000	
BB0608DU	5	7	1.005 0.980	1.050 0.950	10.500	4.75	4.990	5.055 4.990	5.055	0.077 0.000
BB0604DU					9.500		4.978		5.055	
BB0608DU	6	8	1.005 0.980	1.050 0.950	4.25	8.25	5.990	8.015 8.000	6.055	0.077 0.000
BB0608DU					3.75		5.978		5.990	
					11.5	7.75				

Part No.	Nominal Diameter		Bush Wall S ₃	Flange Wall S _{fl}	Flange-Ø D _{fl}	Length B	Shaft-Ø D _J	Housing-Ø D _H	Ass. Inside-Ø D _{i,a}	Clearance C _D							
	D _i	D _o									max. min.	max. min.	max. min.	max. min.	max. min.	max. min.	
BB0806DU	8	10	1.005 0.980	1.050 0.950	15.5 14.5	5.75	7.987 7.972	10.015 10.000	8.055 7.990	0.083 0.003							
BB0808DU						5.25											
BB0810DU						7.75 7.25											
BB1007DU	10	12			18.5 17.5	9.75	9.987 9.972	12.018 12.000	10.058 9.990		0.086 0.003						
BB1009DU						9.25											
BB1012DU						7.25 6.75											
BB1017DU					9.25												
BB1207DU					12	14						20.5 19.5	8.75	11.984 11.966	14.018 14.000	12.058 11.990	0.092 0.006
BB1209DU													12.25				
BB1212DU	11.75																
BB1217DU	17.25 16.75																
BB1412DU	14	16					22.5 21.5	12.25	13.984 13.966		16.018 16.000		14.058 13.990				
BB1417DU					11.75												
BB1509DU	15	17			23.5 22.5	17.25	14.984 14.966	17.018 17.000	15.058 14.990		0.095 0.006						
BB1512DU						16.75											
BB1517DU			12.25														
BB1612DU	16	18	24.5 23.5	11.75	15.984 15.966	18.018 18.000	16.058 15.990	0.112 0.010									
BB1617DU				17.25 16.75													
BB1812DU	18	20	1.005 0.980	1.050 0.950	26.5 25.5	12.25	17.984 17.966	20.021 20.000	18.061 17.990								
BB1817DU						11.75											
BB1822DU						17.25 16.75											
BB2012DU	20	23	1.505 1.475	1.600 1.400	30.5 29.5	11.75	19.980 19.959	23.021 23.000	20.071 19.990								
BB2017DU						11.25											
BB2022DU						16.75 16.25											
BB2512DU						25				28	35.5 34.5	21.75	24.980 24.959	28.021 28.000	25.071 24.990		
BB2517DU												21.25					
BB2522DU	11.75 11.25																
BB3016DU	30	34	42.5 41.5	16.25	29.980 29.959		34.025 34.000	30.085 29.990									
BB3026DU				15.75													
BB3516DU	35	39	2.005 1.970	2.100 1.900	47.5 46.5	26.25	34.975 34.950	39.025 39.000	35.085 34.990								
BB3526DU						25.75											
BB4016DU						40				44	53.5 52.5	16.25	39.975 39.950	44.025 44.000	40.085 39.990		
BB4026DU	15.75																
BB4516DU	45	50	2.505 2.460	2.600 2.400	58.5 57.5	26.25	44.975 44.950	50.025 50.000	45.105 44.990								
BB4526DU						15.75											
						25.75											

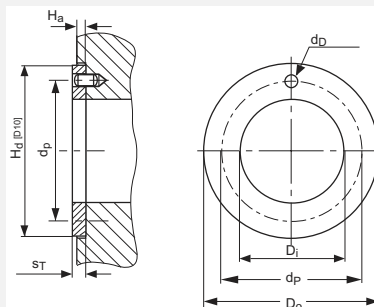
8.3 DU Flanged Washers



All dimensions in mm

Part No.	Inside- \varnothing D_i	Body- \varnothing D_o	Outside- \varnothing D_f	Location- \varnothing d_p
	max. min.	max. min.	max. min.	max. min.
BS 40 DU	40.7 40.2	44.000 43.900	75.0 74.5	65.0 64.5
BS 50 DU	51.5 51.0	55.000 54.880	85.0 84.5	75.0 74.5
BS 60 DU	61.5 61.0	65.000 64.880	95.0 94.5	85.0 84.5
BS 70 DU	71.5 71.0	75.000 74.880	110.0 109.5	100.0 99.5
BS 80 DU	81.5 81.0	85.000 84.860	120.0 119.5	110.0 109.5
BS 90 DU	91.5 91.0	95.000 94.860	130.0 129.5	120.0 119.5
BS 100 DU	101.5 101.0	105.000 104.860	140.0 139.5	130.0 129.5

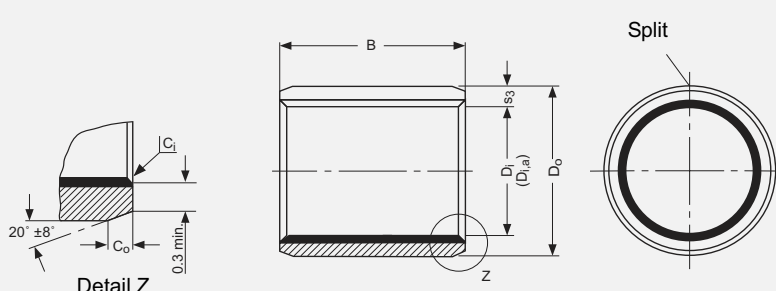
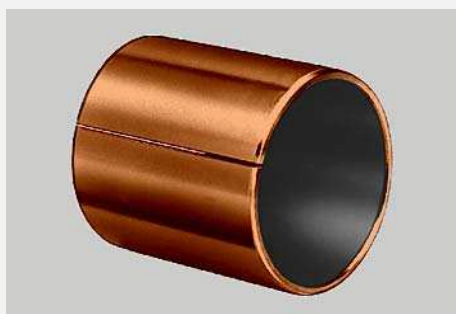
8.4 DU Thrust Washer



All dimensions in mm

Part No.	Inside- \varnothing D_i		Outside- \varnothing D_o	Wall thickness s_T	Dowel hole- \varnothing d_D	Dowel hole PCD- $\varnothing d_p$	Recess Depth H_a
	min.	max.	max. min.	max. min.	max. min.	max. min.	max. min.
WC 08 DU	10.00	10.25	20.00 19.75	1.50 1.45	No Hole	No Hole	1.20 0.95
WC 10 DU	12.00	12.25	24.00 23.75		1.875 1.625	18.12 17.88	
WC 12 DU	14.00	14.25	26.00 25.75		2.375 2.125	20.12 19.88	
WC 14 DU	16.00	16.25	30.00 29.75			22.12 21.88	
WC 16 DU	18.00	18.25	32.00 31.75		3.375 3.125	25.12 24.88	
WC 18 DU	20.00	20.25	36.00 35.75			28.12 27.88	
WC 20 DU	22.00	22.25	38.00 37.75		4.375 4.125	30.12 29.88	
WC 22 DU	24.00	24.25	42.00 41.75			33.12 32.88	
WC 24 DU	26.00	26.25	44.00 43.75		61.12 60.88	35.12 34.88	
WC 25 DU	28.00	28.25	48.00 47.75			38.12 37.88	
WC 30 DU	32.00	32.25	54.00 53.75		65.12 64.88	43.12 42.88	
WC 35 DU	38.00	38.25	62.00 61.75			50.12 49.88	
WC 40 DU	42.00	42.25	66.00 65.75		76.12 75.88	54.12 53.88	
WC 45 DU	48.00	48.25	74.00 73.75			61.12 60.88	
WC 50 DU	52.00	52.25	78.00 77.75	1.70 1.45	65.12 64.88		
WC 60 DU	62.00	62.25	90.00 89.75		76.12 75.88		

8.5 DU-B Cylindrical Bushes



Dimensions and Tolerances according to ISO 3547 and GSP-Specifications

All dimensions in mm

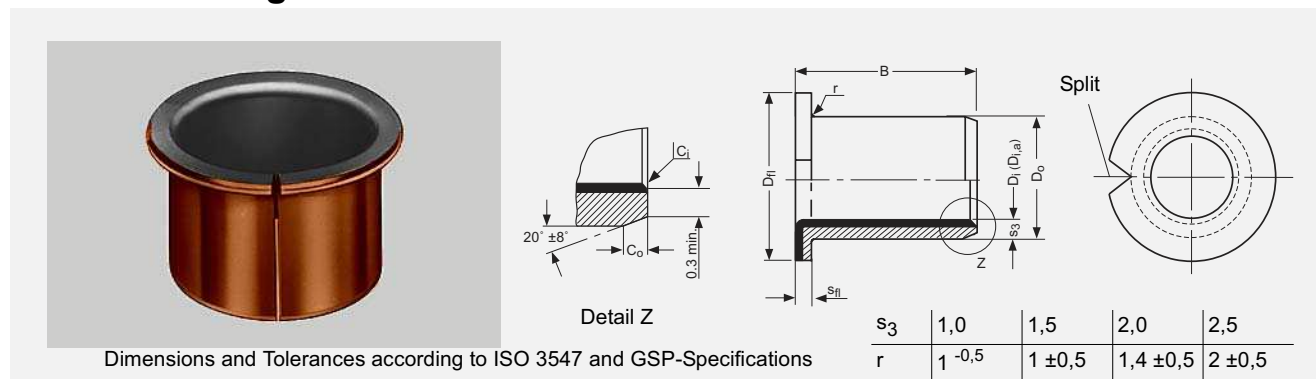
ID and OD chamfers

s_3	C_o	C_i	s_3	C_o	C_i
0.75	0.5 ± 0.3	-0.1 to -0.4	2	1.2 ± 0.4	-0.1 to -0.7
1	0.6 ± 0.4	-0.1 to -0.5	2.5	1.6 ± 0.8	-0.2 to -1.0
1.5	0.6 ± 0.4	-0.1 to -0.7			

Part No.	Nominal Diameter		Wall thickness s_3	Length B	Shaft- \varnothing D_j	Housing- \varnothing D_H	Assembled Inside- \varnothing $D_{i,a}$	Clearance C_D
	D_i	D_o						
0203 DU-B	2	3.5	0.750 0.730	3.25	2.000	3.508	2.048	0.054 0.000
0205 DU-B				2.75				
0306 DU-B				5.25				
0406 DU-B	3	4.5	0.750 0.730	4.75	3.000	4.508	3.048	0.056 0.000
0406 DU-B				6.25				
0505 DU-B	4	5.5	0.750 0.730	5.75	4.000	5.508	4.048	0.056 0.000
0505 DU-B				3.992				
0510 DU-B				5.500				
0606 DU-B	5	7	1.005 0.980	6.25	4.990	7.015	5.055	0.077 0.000
0606 DU-B				5.75				
0608 DU-B				8.25				
0610 DU-B	6	8	1.005 0.980	7.75	5.990	8.015	6.055	0.083 0.003
0610 DU-B				5.978				
0808 DU-B				10.25				
0812 DU-B	8	10	1.005 0.980	9.75	7.987	10.015	8.055	0.083 0.003
0812 DU-B				7.972				
1010 DU-B				11.75				
1015 DU-B	10	12	1.005 0.980	10.25	9.987	12.018	10.058	0.086 0.003
1015 DU-B				9.75				
1208 DU-B				15.25				
1210 DU-B	12	14	1.005 0.980	8.25	11.984	14.018	12.058	0.092 0.006
1210 DU-B				7.75				
1212 DU-B				10.25				
1215 DU-B	14	16	1.005 0.980	9.75	11.966	14.000	11.990	0.092 0.006
1215 DU-B				12.25				
1415 DU-B				11.75				
1420 DU-B	14	16	1.005 0.980	15.25	13.984	16.018	14.058	0.092 0.006
1420 DU-B				14.75				
1515 DU-B				20.25				
1515 DU-B	15	17	1.005 0.980	19.75	14.984	17.018	15.058	0.092 0.006
1515 DU-B				15.25				
1525 DU-B				14.75				
1525 DU-B				25.25	14.966	17.000	14.990	
				24.75				

Part No.	Nominal Diameter		Wall thickness s_3	Length B	Shaft- \varnothing D_J	Housing- \varnothing D_H	Assembled Inside- \varnothing $D_{I,a}$	Clearance C_D		
	D_i	D_o							max. min.	max. min.
1615 DU-B	16	18	1.005 0.980	15.25	15.984 15.966	18.018 18.000	16.058 15.990	0.092 0.006		
1625 DU-B				14.75					25.25	24.75
1820 DU-B	18	20	1.005 0.980	20.25	17.984 17.966	20.021 20.000	18.061 17.990	0.095 0.006		
1825 DU-B				19.75					25.25	24.75
2015 DU-B	20	23	1.505 1.475	15.25	19.980 19.959	23.021 23.000	20.071 19.990	0.112 0.010		
2020 DU-B				14.75					20.25	19.75
2030 DU-B				30.25					29.75	
2215 DU-B	22	25	1.505 1.475	15.25	21.980 21.959	25.021 25.000	22.071 21.990	0.112 0.010		
2220 DU-B				14.75					20.25	19.75
2225 DU-B				20.25					19.75	
2525 DU-B	25	28	25.25	24.75	24.980 24.959	28.021 28.000	25.071 24.990			
2830 DU-B	28	32	30.25	29.75	27.980 27.959	32.025 32.000	28.085 27.990			
3020 DU-B	30	34	2.005 1.970	20.25	29.980 29.959	34.025 34.000	30.085 29.990	0.126 0.010		
3030 DU-B				19.75					30.25	29.75
3040 DU-B				40.25					39.75	
3520 DU-B	35	39	2.005 1.970	20.25	34.975 34.950	39.025 39.000	35.085 34.990	0.135 0.015		
3530 DU-B				19.75					30.25	29.75
4030 DU-B				30.25					29.75	
4050 DU-B	40	44	50.25	49.75	39.975 39.950	44.025 44.000	40.085 39.990			
4530 DU-B	45	50	2.505 2.460	30.25	44.975 44.950	50.025 50.000	45.105 44.990	0.155 0.015		
4550 DU-B				29.75					50.25	49.75
5040 DU-B				40.25					39.75	
5060 DU-B	50	55	2.505 2.460	60.25	49.975 49.950	55.030 55.000	50.110 49.990	0.160 0.015		
5540 DU-B				59.75					54.970 54.940	60.030 60.000
6040 DU-B	60	65	2.505 2.460	40.25	59.970 59.940	65.030 65.000	60.110 59.990	0.170 0.020		
6070 DU-B				39.75					70.25	69.75
7050 DU-B				50.25					49.75	
7070 DU-B	70	75	2.505 2.460	70.25	69.970 69.940	75.030 75.000	70.110 69.990			
8060 DU-B				69.75					60.50	59.50
80100 DU-B	80	85	2.505 2.460	100.50	80.000 79.954	85.035 85.000	80.155 80.020	0.201 0.020		
9060 DU-B				99.50					60.50	59.50
90100 DU-B	90	95	2.490 2.440	100.50	90.000 89.946	95.035 95.000	90.155 90.020	0.209 0.020		
10060 DU-B				99.50					60.50	59.50
100115 DU-B	100	105	2.490 2.440	115.50	100.000 99.946	105.035 105.000	100.155 100.020			
				114.50						

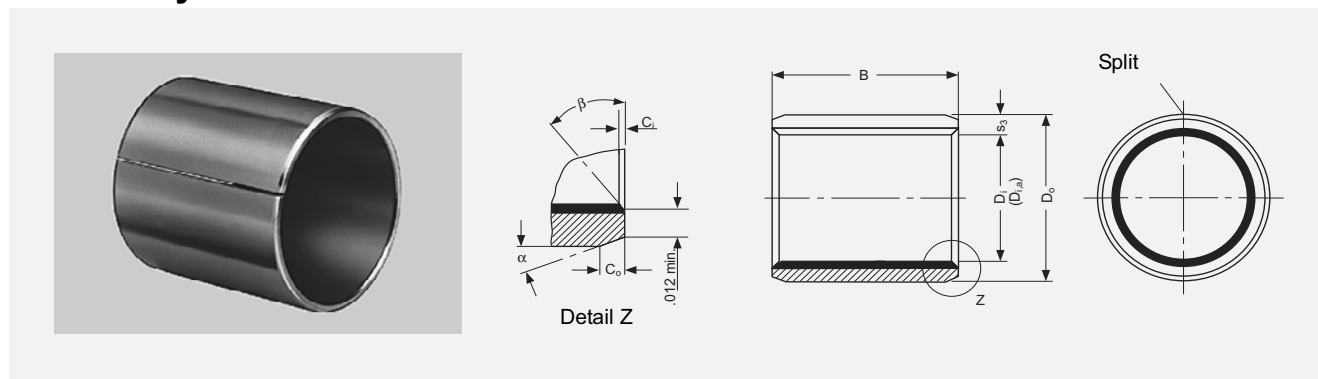
8.6 DU-B Flanged Bushes



All dimensions in mm

Part No.	Nominal Diameter		Bush Wall s_3	Flange Wall s_{fl}	Flange- \varnothing D_f	Length B	Shaft- \varnothing D_J	Housing- \varnothing D_H	Ass. Inside- \varnothing $D_{i,a}$	Clearance C_D
	D_i	D_o								
BB0304DU-B	3	4.5	0.750 0.730	0.800 0.700	7.500 6.500	4.25 3.75	3.000 2.994	4.508 4.500	3.048 3.000	0.054 0.000
BB0404DU-B	4	5.5			9.500 8.500		4.000 3.992	5.508 4.500	4.048 4.000	0.056 0.000
BB0505DU-B	5	7	1.005 0.980	1.050 0.950	10.500 9.500	5.25 4.75	4.990 4.978	7.015 7.000	5.055 4.990	0.077 0.000
BB0604DU-B	6	8			12.5 11.5	4.25 3.75	5.990 5.978	8.015 8.000	6.055 5.990	0.083 0.000
BB0806DU-B	8	10			15.5 14.5	5.75 5.25	7.987 7.972	10.015 10.000	8.055 7.990	0.086 0.003
BB0810DU-B					9.75 9.25	7.987 7.972	10.058 9.990			
BB1007DU-B	10	12			18.5 17.5	7.25 6.75	9.987 9.972	12.018 12.000	10.058 9.990	0.095 0.006
BB1012DU-B					12.25 11.75	9.987 9.972	12.058 11.990			
BB1207DU-B	12	14			20.5 19.5	7.25 6.75	11.984 11.966	14.018 14.000	12.058 11.990	0.112 0.010
BB1209DU-B						9.25 8.75	11.984 11.966			
BB1212DU-B						12.25 11.75	11.984 11.966			
BB1417DU-B	14	16			22.5 21.5	17.25 16.75	13.984 13.966	16.018 16.000	14.05 13.990	0.095 0.006
BB1512DU-B	15	17			23.5 22.5	12.25 11.75	14.984 14.966	17.018 17.000	15.058 14.990	0.126 0.010
BB1517DU-B						17.25 16.75	14.984 14.966			
BB1612DU-B	16	18			24.5 23.5	12.25 11.75	15.984 15.966	18.018 18.000	16.058 15.990	0.135 0.015
BB1617DU-B						17.25 16.75	15.984 15.966			
BB1822DU-B	18	20	26.5 25.5	22.25 21.75	17.984 17.966	20.021 20.000	18.061 17.990	0.135 0.015		
BB2012DU-B	20	23	30.5 29.5	11.75 11.25	19.980 19.959	23.021 23.000	20.071 19.990	0.155 0.015		
BB2017DU-B				16.75 16.25	19.980 19.959					
BB2522DU-B	25	28	35.5 34.5	21.75 21.25	24.980 24.959	28.021 28.000	25.071 24.990	0.155 0.015		
BB3016DU-B	30	34	42.5 41.5	16.25 15.75	29.980 29.959	34.025 34.000	30.085 29.990	0.155 0.015		
BB3026DU-B				26.25 25.75	29.980 29.959					
BB3526DU-B	35	39	47.5 46.5	26.25 25.75	34.975 34.950	39.025 39.000	35.085 34.990	0.155 0.015		
BB4026DU-B	40	44	2.005 1.970	2.100 1.900	53.5 52.5	26.25	39.975 39.950	44.025 44.000	40.085 39.990	0.155 0.015
BB4526DU-B	45	50	2.505 2.460	2.600 2.400	58.5 57.5	25.75	44.975 44.950	50.025 50.000	45.105 44.990	0.155 0.015

8.7 DU Cylindrical Bushes - Inch sizes



All dimensions in inch

ID and OD chamfers

D _i	C _o	α	C _i	β
1/8" - 5/16"	0.008" - 0.024"	30°-45°	0.004" - 0.012"	30°-45°
3/8" - 11/16"	0.020" - 0.040"	20°-30°	0.005" - 0.025"	40°-55°
3/4" - 7"	0.020" - 0.040"	15°-25°	0.005" - 0.025"	40°-50°

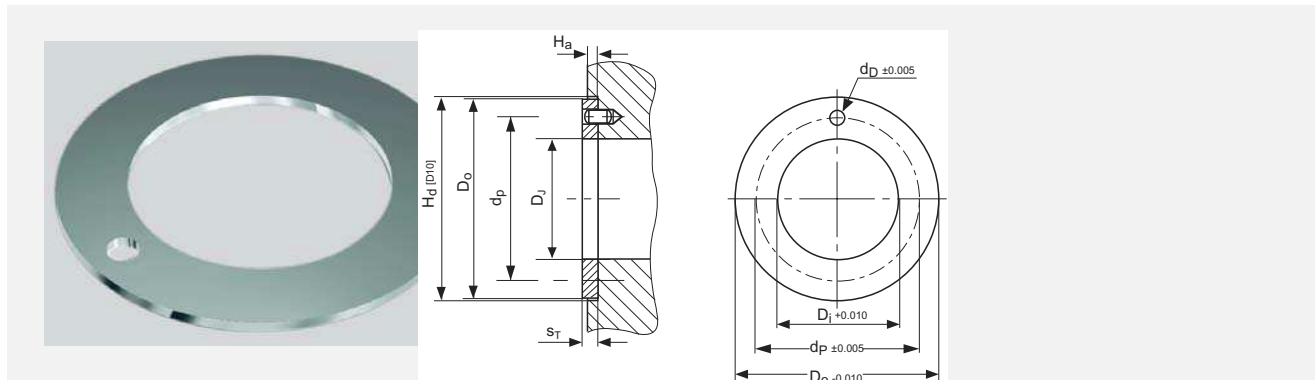
Part No.	Nominal Diameter			Bush Wall s ₃ max. min.	Length B max. min.	Shaft-∅ D _J max. min.	Housing-∅ D _H max. min.	Ass. Inside-∅ D _{i,a} max. min.	Clearance C _D max. min.	
	D _i	D _O	B							
02DU02	1/8	3/16	1/8	0.0315 0.0305	0.1350 0.1150	0.1243 0.1236	0.1878 0.1873	0.1268 0.1243	0.0032 0.0000	
02DU03			3/16		0.1975 0.1775					
025DU025	5/32	7/32	5/32		0.16625 0.14265	0.1554 0.1547	0.2191 0.2186	0.1581 0.1556	0.0034 0.0002	
025DU04			1/4		0.2600 0.2400					
03DU03	3/16	1/4	3/16		0.1975 0.1775	0.1865 0.1858	0.2503 0.2497	0.1893 0.1867	0.0035 0.0002	
03DU04			1/4		0.2600 0.2400					
03DU06			3/8		0.3850 0.3650					
04DU04	1/4	5/16	1/4		0.2600 0.2400	0.2490 0.2481	0.3128 0.3122	0.2518 0.2492	0.0037 0.0002	
04DU06			3/8		0.3850 0.3650					
05DU06	5/16	3/8	3/8		0.0471 0.0461	0.3115 0.3106	0.3753 0.3747	0.3143 0.3117	0.0038 0.0002	
05DU08			1/2							0.5100 0.4900
06DU06	3/8	15/32	3/8			0.3850 0.3650	0.3740 0.3731	0.4691 0.4684	0.3769 0.3742	0.0039 0.0002
06DU08			1/2			0.5100 0.4900				
06DU12			3/4			0.7600 0.7400				
07DU08	7/16	17/32	1/2			0.5100 0.4900	0.4365 0.4355	0.5316 0.5309	0.4394 0.4367	0.0039 0.0002
07DU12			3/4			0.7600 0.7400				
08DU06	1/2	19/32	3/8	0.3850 0.3650		0.4990 0.4980	0.5941 0.5934	0.5019 0.4992	0.0039 0.0002	
08DU08			1/2	0.5100 0.4900						
08DU10			5/8	0.6350 0.6150						
08DU14			7/8	0.8850 0.8650						
09DU08	9/16	21/32	1/2	0.5100 0.4900		0.5615 0.5605	0.6566 0.6559	0.5644 0.5617	0.0039 0.0002	
09DU12			3/4	0.7600 0.7400						

8 Standard Products

Part No.	Nominal Diameter			Bush Wall S ₃	Length B	Shaft-∅ D _J	Housing-∅ D _H	Ass. Inside-∅ D _{i,a}	Clearance C _D
	D _i	D _O	B	max. min.	max. min.	max. min.	max. min.	max. min.	max. min.
10DU08	5/8	23/32	1/2	0.0471 0.0461	0.5100 0.4900	0.6240 0.6230	0.7192 0.7184	0.6270 0.6242	0.0040 0.0002
10DU10			5/8		0.6350 0.6150				
10DU12			3/4		0.7600 0.7400				
10DU14			7/8		0.8850 0.8650				
11DU14	11/16	25/32	7/8			0.6865 0.6855	0.7817 0.7809	0.6895 0.6867	
12DU08	3/4	7/8	1/2	0.0627 0.0615	0.5100 0.4900	0.7491 0.7479	0.8755 0.8747	0.7525 0.7493	0.0046 0.0002
12DU12			3/4		0.7600 0.7400				
12DU16			1		1.0100 0.9900				
14DU12	7/8	1	3/4		0.7600 0.7400	0.8741 0.8729	1.0005 0.9997	0.8775 0.8743	
14DU14			7/8	0.8850 0.8650					
14DU16			1	1.0100 0.9900					
16DU12	1	1 1/8	3/4		0.7600 0.7400	0.9991 0.9979	1.1256 1.1246	1.0026 0.9992	0.0047 0.0001
16DU16			1	1.0100 0.9900					
16DU24			1 1/2	1.5100 1.4900					
18DU12	1 1/8	1 9/32	3/4		0.7600 0.7400	1.1238 1.1226	1.2818 1.2808	1.1278 1.1240	0.0052 0.0002
18DU16			1	1.0100 0.9900					
20DU12	1 1/4	1 13/32	3/4		0.7600 0.7400	1.2488 1.2472	1.4068 1.4058	1.2528 1.2490	
20DU16			1	1.0100 0.9900					
20DU20			1 1/4	1.2600 1.2400					
20DU28			1 3/4	1.7600 1.7400					
22DU16	1 3/8	1 17/32	1		1.0100 0.9900	1.3738 1.3722	1.5318 1.5308	1.3778 1.3740	0.0056 0.0002
22DU22			1 3/8	1.3850 1.3650					
22DU28			1 3/4	1.7600 1.7400					
24DU16	1 1/2	1 21/32	1		1.0100 0.9900	1.4988 1.4972	1.6568 1.6558	1.5028 1.4990	
24DU20			1 1/4	1.2600 1.2400					
24DU24			1 1/2	1.5100 1.4900					
24DU32			2	2.0100 1.9900					
26DU16	1 5/8	1 25/32	1		1.0100 0.9900	1.6238 1.6222	1.7818 1.7808	1.6278 1.6240	0.0056 0.0002
26DU24			1 1/2	1.5100 1.4900					
28DU16	1 3/4	1 15/16	1		1.0100 0.9900	1.7487 1.7471	1.9381 1.9371	1.7535 1.7489	0.0064 0.0002
28DU24			1 1/2	1.5100 1.4900					
28DU28			1 3/4	1.7600 1.7400					
28DU32			2	2.0100 1.9900					

Part No.	Nominal Diameter			Bush Wall S_3	Length B	Shaft- \varnothing D_j	Housing- \varnothing D_H	Ass. Inside- \varnothing $D_{i,a}$	Clearance C_D
	D_j	D_o	B	max. min.	max. min.	max. min.	max. min.	max. min.	max. min.
30DU16	1 ^{7/8}	2 ^{1/16}	1	0.0941 0.0923	1.0100 0.9900	1.8737 1.8721	2.0633 2.0621	1.8787 1.8739	0.0066 0.0002
30DU30			1 ^{7/8}		1.8850 1.8650				
30DU36			2 ^{1/4}		2.2600 2.2400				
32DU16	2	2 ^{3/16}	1	0.0928 0.0902	1.0100 0.9900	1.9987 1.9969	2.1883 2.1871	2.0037 1.9989	0.0068 0.0002
32DU24			1 ^{1/2}		1.5100 1.4900				
32DU32			2		2.0100 1.9900				
32DU40			2 ^{1/2}		2.5100 2.4900				
36DU32	2 ^{1/4}	2 ^{7/16}	2	0.0928 0.0902	2.0100 1.4900	2.2507 2.2489	2.4377 2.4365	2.2573 2.2509	0.0084 0.0002
36DU36			2 ^{1/4}		2.2600 2.2400				
36DU40			2 ^{1/2}		2.5100 2.4900				
36DU48			3		3.0100 2.9900				
40DU32	2 ^{1/2}	2 ^{11/16}	2	0.0928 0.0902	2.0100 1.9900	2.5011 2.4993	2.6881 2.6869	2.5077 2.5013	0.0084 0.0002
40DU40			2 ^{1/2}		2.5100 2.4900				
40DU48			3		3.0100 2.9900				
40DU56			3 ^{1/2}		3.5100 3.4900				
44DU32	2 ^{3/4}	2 ^{15/16}	2	0.0928 0.0902	2.0100 1.9900	2.7500 2.7482	2.9370 2.9358	2.7566 2.7502	0.0086 0.0002
44DU40			2 ^{1/2}		2.5100 2.4900				
44DU48			3		3.0100 2.9900				
44DU56			3 ^{1/2}		3.5100 3.4900				
48DU32	3	3 ^{3/16}	2 ^{1/2}	0.0928 0.0902	2.5100 2.4900	3.0000 2.9982	3.1872 3.1858	3.0068 3.0002	0.0090 0.0002
48DU48			3		3.0100 2.9900				
48DU60			3 ^{3/4}		3.7600 3.7400				
56DU40	3 ^{1/2}	3 ^{11/16}	2 ^{1/2}	0.0928 0.0902	2.5100 2.4900	3.5000 3.4978	3.6872 3.6858	3.5068 3.5002	0.0090 0.0002
56DU48			3		3.0100 2.9900				
56DU60			3 ^{3/4}		3.7600 3.7400				
64DU48	4	4 ^{3/16}	3	0.0928 0.0902	3.0100 2.9900	4.0000 3.9978	4.1872 4.1858	4.0068 4.0002	0.0090 0.0002
64DU60			3 ^{3/4}		3.7600 3.7400				
64DU76			4 ^{3/4}		4.7600 4.7400				
80DU48	5	5 ^{3/16}	3	0.0928 0.0902	3.0100 2.9900	4.9986 4.9961	5.1860 5.1844	5.0056 4.9988	0.0095 0.0002
80DU60			3 ^{3/4}		3.7600 3.7400				
96DU48			3		3.0100 2.9900				
96DU60	6	6 ^{3/16}	3 ^{3/4}	0.0928 0.0902	3.7600 3.7400	6.0000 5.9975	6.1874 6.1858	6.0070 6.0002	0.0097 0.0002
112DU60			7		7 ^{3/16}				

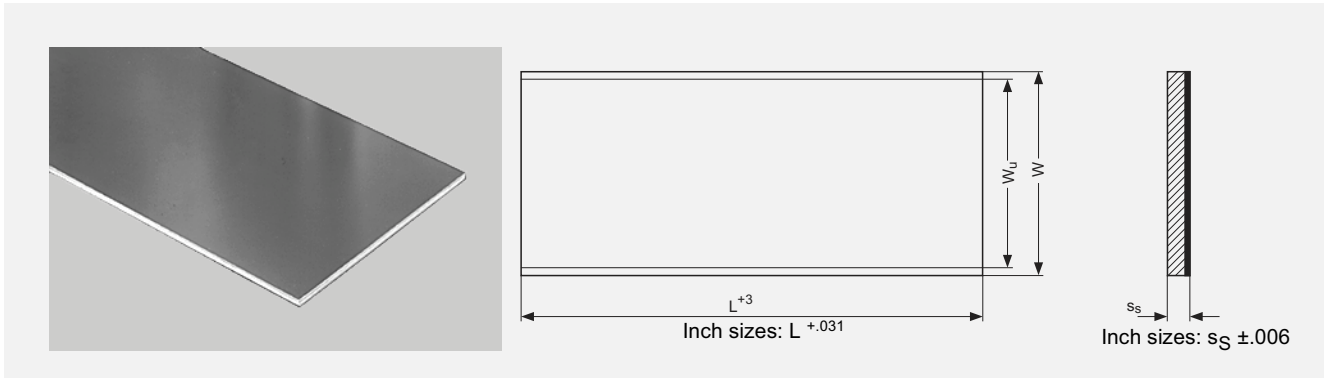
8.8 DU Thrust Washers - Inch sizes



All dimensions in inch

Part No.	Inside- \varnothing D_i		Outside- \varnothing D_o	Wall thickness s_T		Dowel hole- \varnothing d_D	Dowel hole PCD- \varnothing d_P		Recess Depth H_a	
	max.	min.		max.	min.		max.	min.	max.	min.
DU06	0.510	0.500	0.875 0.865	0.063 0.061	0.077 0.067	0.692 0.682	0.786 0.776	0.880 0.870	0.942 0.932	1.005 0.995
DU07	0.572	0.562	1.000 0.990							
DU08	0.635	0.625	1.125 1.115							
DU09	0.697	0.687	1.187 1.177							
DU10	0.760	0.750	1.250 1.240							
DU11	0.822	0.812	1.375 1.365							
DU12	0.885	0.875	1.500 1.490							
DU14	1.010	1.000	1.750 1.740							
DU16	1.135	1.125	2.000 1.990							
DU18	1.260	1.250	2.125 2.115							
DU20	1.385	1.375	2.250 2.240							
DU22	1.510	1.500	2.500 2.490							
DU24	1.635	1.625	2.625 2.615							
DU26	1.760	1.750	2.750 2.740							
DU28	2.010	2.000	3.000 2.990	0.093 0.091	0.202 0.192	2.505 2.495	2.630 2.620	2.755 2.745	0.080 0.070	
DU30	2.135	2.125	3.125 3.115							
DU32	2.260	2.250	3.250 3.240							

8.9 DU Strip



All dimensions in mm

Part No.	Length L	Total Width W	Useable Width W _U	Thickness s _S	
				max.	min.
S 07150 DU	500	160	150	0.744	0.704
S 10200 DU		225	215	0.990	0.950
S 15240 DU		254	245	1.510	1.470
S 20240 DU				2.000	1.960
S 25240 DU				2.500	2.460
S 30240 DU				3.060	3.020

8.10 DU-B Strip

All dimensions in mm

Part No.	Length L	Total Width W	Useable Width W _U	Thickness s _S	
				max.	min.
S 10180 DU-B	500	193	180	0.990	0.950
S 15180 DU-B				1.500	1.470
S 20180 DU-B				2.000	1.960
S 25180 DU-B				2.500	2.460
				2.460	

8.11 DU Strip - Inch sizes

All dimensions in inch

Part No.	Length L	Total Width W	Thickness s _S
Group 0	18	2.75	0.0277-0.0293
Group 1		4.00	0.0431-0.0447
Group 2			0.0586-0.0602
Group 3			0.0740-0.0756
Group 4			0.0897-0.0913
Group 5			0.1190-0.1210