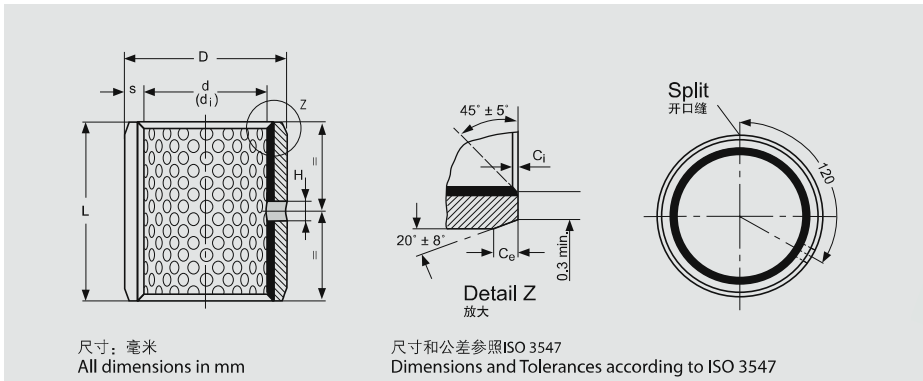




## 5.8 EX 直套规格及公差 EX Sleeve Bushing Specification & Tolerance



### 内外倒角尺寸表 Inside & Outside Chamfers

壁厚 Wall thickness S	内倒角 Inside Chamfer C <sub>i</sub>	外倒角 Outside Chamfer C <sub>e</sub>
1.00	0.30 ± 0.20	0.60 ± 0.40
1.50	0.40 ± 0.30	0.60 ± 0.40
2.00	0.40 ± 0.30	1.20 ± 0.40
2.50	0.60 ± 0.30	1.80 ± 0.60

### 直套型号标注方式 Bushing Symbol

直套型号标注方式 Bushes Symbol	EX - □	× ×	× ×
直套型号 Bushing Type			
直套内径 Bushing I.D.			
直套高度 Bushing Length			

内径 Internal Diameter			外径 External Diameter			高度 Length	壁厚 Wall Thickness	油孔直径 Oil Hole-Φ H	型号 Part No
内径 d	装配轴径 Shaft-Φ d <sub>s</sub>	装配后内径 Φ d <sub>i</sub>	外径 D	装配座孔 Housing-Φ D <sub>H</sub>	理论外径公差 O.D. Φ D <sub>t</sub>	ID<80 L ± 0.25 ID>80 L ± 0.50	S		
10	10.000 9.978	10.108 10.040	12	12.018 12.000		10	0.980 0.955	3	EX 1010
						12		EX 1012	
						15		4	EX 1015
						20		EX 1020	
12	12.000 11.973	12.108 12.040	14	14.018 14.000		10		3	EX 1210
						12		EX 1212	
						15		4	EX 1215
						20		EX 1220	
14	14.000 13.973	14.108 14.040	16	16.018 16.000		25	4	EX 1225	
						15	EX 1415		
						20	EX 1420		
15	15.000 14.973	15.108 15.040	17	17.018 17.000		25	4	EX 1425	
						10	3	EX 1510	
						12	EX 1512		
						15	4	EX 1515	
						20	EX 1520		
						25		EX 1525	



内径 Internal Diameter			外径 External Diameter			高度 Length	壁厚 Wall Thickness	油孔直径 Oil Hole- $\Phi$ H	型号 Part No						
内径 d	装配轴径 Shaft- $\Phi d_s$	装配后内径 $\Phi d_i$	外径 D	装配座孔 Housing- $\Phi D_H$	理论外径公差 O.D. $\Phi D_t$	ID<80 L $\pm$ 0.25	S								
						ID>80 L $\pm$ 0.50									
16	16.000 15.973	16.108 16.040	18	18.018 18.000	+0.065 +0.030	15	0.980 0.955	4	EX 1615						
						20			EX 1620						
18	18.000 17.973	18.111 18.040	20	20.021 20.000	+0.075 +0.035	25			1.475 1.445	6	EX 1625				
						15					EX 1815				
						20					EX 1820				
20	20.000 19.967	20.131 20.050	23	23.021 23.000	+0.075 +0.035	25					1.475 1.445	6	EX 1825		
						10	EX 2010								
						15	EX 2015								
						20	EX 2020								
22	22.000 21.967	22.131 22.050	25	25.021 25.000	+0.075 +0.035	25	1.475 1.445	6					EX 2025		
						30							EX 2030		
						15							EX 2215		
						20							EX 2220		
25	25.000 24.967	25.131 25.050	28	28.021 28.000	+0.075 +0.035	25							1.475 1.445	6	EX 2225
						30			EX 2230						
						15			EX 2515						
						20			EX 2520						
28	28.000 27.967	28.155 28.060	32	32.025 32.000	+0.085 +0.045	25			1.970 1.935	6	EX 2525				
						30					EX 2530				
						20					EX 2820				
30	30.000 29.967	30.155 30.060	34	34.025 34.000	+0.085 +0.045	25					1.970 1.935	6			EX 2825
						30	EX 2830								
						40	EX 3020								
32	32.000 31.961	32.155 32.060	36	36.025 36.000	+0.085 +0.045	30	1.970 1.935	6							EX 3030
						35									EX 3040
						20							EX 3220		
						30							EX 3230		
35	35.000 34.961	35.155 35.060	39	39.025 39.000	+0.085 +0.045	35							1.970 1.935	6	EX 3235
						40									EX 3240
						20			EX 3520						
						30			EX 3530						
35	35.000 34.961	35.155 35.060	39	39.025 39.000	+0.085 +0.045	35			1.970 1.935	6					EX 3535
						40					EX 3540				
						50					EX 3550				



内径 Internal Diameter			外径 External Diameter			高度 Length	壁厚 Wall Thickness	油孔直径 Oil Hole- $\Phi$ H	型号 Part No
内径 d	装配轴径 Shaft- $\Phi d_s$	装配后内径 $\Phi d_i$	外径 D	装配座孔 Housing- $\Phi D_H$	理论外径公差 O.D. $\Phi D_t$	ID<80 L $\pm$ 0.25 ID>80 L $\pm$ 0.50	S		
40	40.000 39.961	40.155 40.060	44	44.025 44.000		20	1.970 1.935		EX 4020
						30			EX 4030
						40			EX 4040
						50			EX 4050
45	45.000 44.961	45.195 45.080	50	50.025 50.000	+0.085 +0.045	25			EX 4520
						30			EX 4530
						40			EX 4540
						45			EX 4545
						50			EX 4550
50	50.000 49.961	50.200 50.080	55	55.030 55.000		40		8	EX 5040
						50			EX 5050
						60			EX 5060
55	55.000 54.954	55.200 55.080	60	60.030 60.000		20	2.460 2.415		EX 5520
						25			EX 5525
						30			EX 5530
						40			EX 5540
						50			EX 5550
						60			EX 5560
60	60.000 59.954	60.200 60.080	65	65.030 65.000		30			EX 6030
						40			EX 6040
						60			EX 6060
						70			EX 6070
65	65.000 64.954	65.262 65.100	70	70.030 70.000		40			EX 6540
						50			EX 6550
						60			EX 6560
						70			EX 6570
70	70.000 69.954	70.262 70.100	75	75.030 75.000		40	2.450 2.384	8	EX 7040
						50			EX 7050
						65			EX 7065
						70			EX 7070
						80			EX 7080
75	75.000 74.954	75.262 75.100	80	80.030 80.000		40		9.5	EX 7540
						60			EX 7560
						80			EX 7580



内径 Internal Diameter			外径 External Diameter			高度 Length	壁厚 Wall Thickness	油孔直径 Oil Hole-Φ H	型号 Part No
内径 d	装配轴径 Shaft-Φd <sub>s</sub>	装配后内径 Φd <sub>i</sub>	外径 D	装配座孔 Housing-ΦD <sub>H</sub>	理论外径公差 O.D. ΦD <sub>i</sub>	ID<80 L±0.25	S		
						ID>80 L±0.50			
80	80.000 79.954	80.267 80.100	85	85.035 85.000		40	2.450 2.384	9.5	EX 8040
						60			EX 8060
						80			EX 8080
						100			EX 80100
85	85.000 84.946	85.267 85.100	90	90.035 90.000		30	2.450 2.384	9.5	EX 8530
						40			EX 8540
						60			EX 8560
						80			EX 8580
						100			EX 85100
90	90.000 89.946	90.267 90.100	95	95.035 90.000		40	2.450 2.384	9.5	EX 9040
						60			EX 9060
						80			EX 9080
						90			EX 9090
						100			EX 90100
95	95.000 94.946	95.267 95.100	100	100.035 100.000	+0.120 +0.070	60	2.450 2.384	9.5	EX 9560
						100			EX95100
100	100.000 99.946	100.267 100.100	105	105.035 105.000		50	2.450 2.384	9.5	EX 10050
						60			EX 10060
						80			EX 10080
						95			EX 10095
						115			EX 100115
105	105.000 104.946	105.267 105.100	110	110.035 110.000		60	2.450 2.384	9.5	EX 10560
						110			EX 105110
						115			EX 105115
110	110.000 109.946	110.267 105.100	115	115.035 115.000		60	2.450 2.384	9.5	EX 11060
						110			EX 110110
						115			EX 110115
115	115.000 114.946	115.267 115.100	120	120.035 120.000		50	2.450 2.384	9.5	EX 11550
						70			EX 11570
120	120.000 119.946	120.272 120.100	125	125.040 125.000		60	2.450 2.384	9.5	EX 12060
						100			EX 120100
						110			EX 120110
125	125.000 124.937	125.272 125.000	130	130.040 130.000	+0.170 +0.100	60	2.450 2.384	9.5	EX 12560
						100			EX 125100
						110			EX 125110



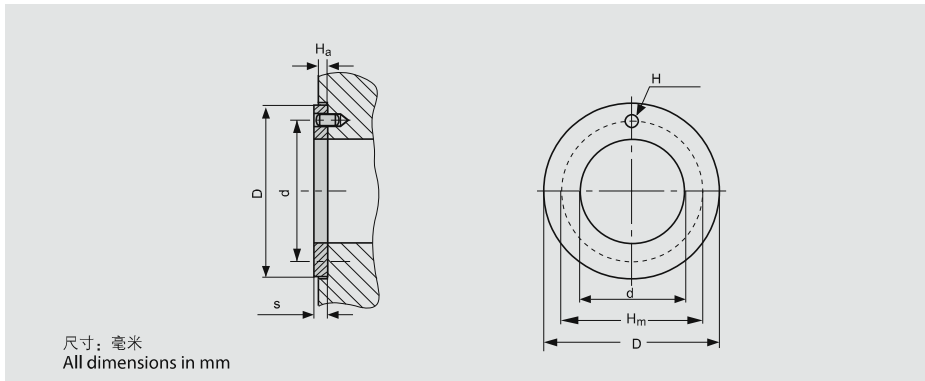
内径 Internal Diameter			外径 External Diameter			高度 Length	壁厚 Wall Thickness	油孔直径 Oil Hole- $\Phi$ H	型号 Part No
内径 d	装配轴径 Shaft- $\Phi d_s$	装配后内径 $\Phi d_i$	外径 D	装配座孔 Housing- $\Phi D_H$	理论外径公差 O.D. $\Phi D_t$	ID<80 L $\pm$ 0.25 ID>80 L $\pm$ 0.50	S		
130	130.000 129.937	130.280 130.130	135	135.040 135.000		50			EX 13050
						60			EX 13060
						80			EX 13080
						100			EX 130100
135	135.000 134.937	135.280 138.130	140	140.040 140.000		60			EX 13560
						80			EX 13580
140	140.000 139.937	140.280 140.130	145	145.040 145.000		50			EX 14050
						60			EX 14060
						80			EX 14080
						100			EX 140100
150	150.000 149.937	150.280 150.130	155	155.040 155.000	+0.170 +0.100	50			EX 15050
						60			EX 15060
						80			EX 15080
						100			EX 1501003
160	160.000 159.937	160.280 160.130	165	165.040 165.000		50			EX 16050
						60			EX 16060
						80			EX 16080
						100			EX 160100
170	170.000 169.937	170.280 170.130	175	175.040 175.000		50			EX 17050
						60			EX 17060
						80			EX 17080
						100			EX 170100
180	180.000 179.937	180.286 180.130	185	185.046 185.000		50			EX 18050
						60			EX 18060
						80			EX 18080
						100			EX 180100
190	190.000 189.928	190.286 190.130	195	195.046 195.000	+0.210 +0.130	50			EX 19050
						60			EX 19060
						80			EX 19080
						100			EX 190100
						120			EX 190120
200	200.000 199.928	200.286 200.130	205	205.046 205.000		50			EX 20050
						60			EX 20060
						80			EX 20080



内径 Internal Diameter			外径 External Diameter			高度 Length	壁厚 Wall Thickness	油孔直径 Oil Hole-Φ H	型号 Part No
内径 d	装配轴径 Shaft-Φd <sub>s</sub>	装配后内径 Φd <sub>i</sub>	外径 D	装配座孔 Housing-ΦD <sub>H</sub>	理论外径公差 O.D. ΦD <sub>i</sub>	ID<80 L±0.25	S		
						ID>80 L±0.50			
200	200.000 199.928	200.286 200.130	205	205.046 205.000		80			EX 20080
						100			EX 200100
						120			EX 200120
220	220.000 219.928	220.286 220.130	225	225.046 225.000	+0.210 +0.130	50	2.435 2.380	9.5	EX 22050
						60			EX 22060
						80			EX 22080
						100			EX 220100
						120			EX 220120
240	240.000 239.928	240.286 240.130	245	245.046 245.000		50			EX 24050
						60			EX 24060
						80			EX 24080
						100			EX 240100
						120			EX 240120
250	250.000 249.928	250.292 250.130	255	255.052 255.000		50	2.435 2.380	9.5	EX 25050
						60			EX 25060
						80			EX 25080
						100			EX 250100
						120			EX 250120
260	260.000 259.919	260.292 260.130	265	265.052 265.000		50			EX 26050
						60			EX 26060
						80			EX 26080
						100			EX 260100
						120			EX 260120
280	280.000 279.919	280.292 280.130	285	285.052 285.000	+0.260 +0.170	50			EX 28050
						60			EX 28060
						80			EX 28080
						100			EX 280100
						120			EX 280120
300	300.000 299.919	300.292 300.130	305	305.052 305.000		50			EX 30050
						60			EX 30060
						80			EX 30080
						100			EX 300100
						120			EX 300120



## 5.9 EX 垫片规格及公差 EX Thrust washer Specification & Tolerance



### 垫片型号标注方式

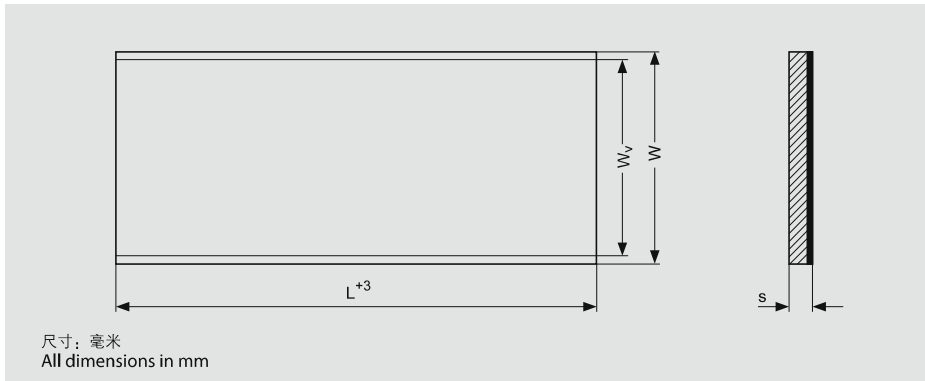
#### Washer Symbol

垫片型号标注方式 Washer Symbol	WC	× ×	EX - □
垫片 Washer			
垫片内径 Washer I.D.			
垫片型号 Washer Type			

内径 Internal Diameter d		外径 External Diameter D		壁厚 Thickness s	定位孔中心 Dowel Hole PCD-Φ $H_m \pm 0.12$	定位孔直径 Dowel Hole-Φ H	Recess Depth $H_a$	型号 Part No
min.	max.	min.	max.	max. min.	max. min.	$\pm 0.005''$	max. min.	
12.00	12.25	23.75	24.00	1.50 1.45	18	1.9 1.6	1.20 0.80	WC 10 EX
14.00	14.25	25.75	26.00		20	2.4 2.1		WC 12 EX
16.00	16.25	29.75	30.00		22			WC 14 EX
18.00	18.25	31.75	32.00		25	3.4 3.1		WC 16 EX
20.00	20.25	35.75	36.00		28			WC 18 EX
22.00	22.25	37.75	38.00		30			WC 20 EX
24.00	24.25	41.75	42.00		33			WC 22 EX
26.00	26.25	43.75	44.00		35			WC 24 EX
28.00	28.25	47.75	48.00		38			WC 25 EX
32.00	32.25	53.75	54.00		43	4.4 4.1		WC 30 EX
38.00	38.25	61.75	62.00		50			WC 35 EX
42.00	42.25	65.75	66.00		54			WC 40 EX
48.00	48.25	73.75	74.00	61	WC 45 EX			
52.00	52.25	77.75	78.00	1.95 2.00	65	1.70 1.30	WC 50 EX	



## 5.10 EX 板材规格及公差 EX Strip Specification & Tolerance



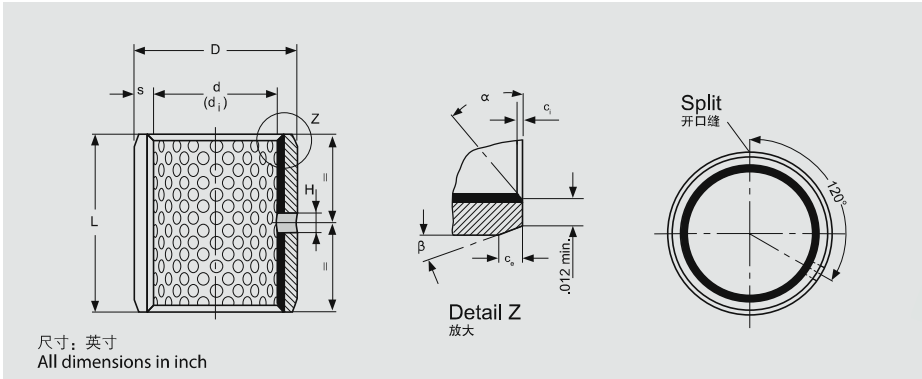
### 板材标注方式 Strip Symbol

板材标注方式 Strip Symbol	S	× × ×	× × ×	EX - □
板材 Strip				
板材厚度 Strip Wall Thickness				
板材宽度 Strip Width				
板材型号 Strip Type				

长度 Length L	宽度 Width $W_v$	壁厚 Thickness S-0.05	型号 Part No
500	130 – 150	1.00	S 100 90 EX
	130 – 150	1.50	S 152 00 EX
	130 – 150	2.00	S 202 00 EX
		2.50	S 252 00 EX



### 5.11 EX 英制规格及公差 EX Inch Bushing Specification & Tolerance



尺寸：英寸  
All dimensions in inch

#### 内外倒角尺寸表 Inside and Outside Chamfers Unit mm

壁厚 Wall thickness	内倒角 ID Chamfer		外倒角 OD Chamfer	
	C <sub>i</sub>	α	C <sub>e</sub>	β
0.0315"	0.008"-0.024"	30°-45°	0.004"-0.012"	30°-45°
0.0471"	0.020"-0.040"	20°-30°	0.005"-0.025"	40°-55°
0.0627"-0.0928"	0.020"-0.040"	15°-25°	0.005"-0.025"	40°-50°

#### 直套型号标注方式 Bushing Symbol

直套型号标注方式 Bushes Symbol	× ×	EX - □	× ×
直套内径 Bushing I. D.			
直套型号 Bushing Type			
直套高度 Bushing Length			

内径 Internal Diameter			外径 External Diameter		高度 Width	壁厚 Wall Thickness	油孔直径 Oil Hole-Φ H	型号 Part No
内径 d	装配轴径 Shaft-Φd <sub>s</sub>	供货内径 Φd <sub>i</sub>	外径 D	装配座孔 D <sub>H</sub>	L ± 0.01"	S		
3/8	0.3648 0.3639	0.3694 0.3667	15/32	0.4694 0.4687	0.375	0.0510 0.0500	5/32	06 EX 06
					0.500			06 EX 08
					0.750			06 EX 12
7/16	0.4273 0.4263	0.4319 0.4292	17/32	0.5319 0.5312	0.500			07 EX 08
					0.750			07 EX 12
					0.375			08 EX 06
1/2	0.4897 0.4887	0.4944 0.4917	19/32	0.5944 0.5937	0.500			08 EX 08
					0.625			08 EX 10
					0.875			08 EX 14
9/16	0.5522 0.5512	0.5569 0.5542	21/32	0.6569 0.6562	0.500			09 EX 08
					0.750			09 EX 12
					0.500			10 EX 08
5/8	0.6146 0.6136	0.6195 0.6167	23/32	0.7195 0.7187	0.625	10 EX 10		
					0.750	10 EX 12		
					0.875	10 EX 14		
3/4	0.7390 0.7378	0.7444 0.7412	7/8	0.8758 0.8750	0.500	12 EX 08		
					0.750	12 EX 12		
					1.000	12 EX 16		



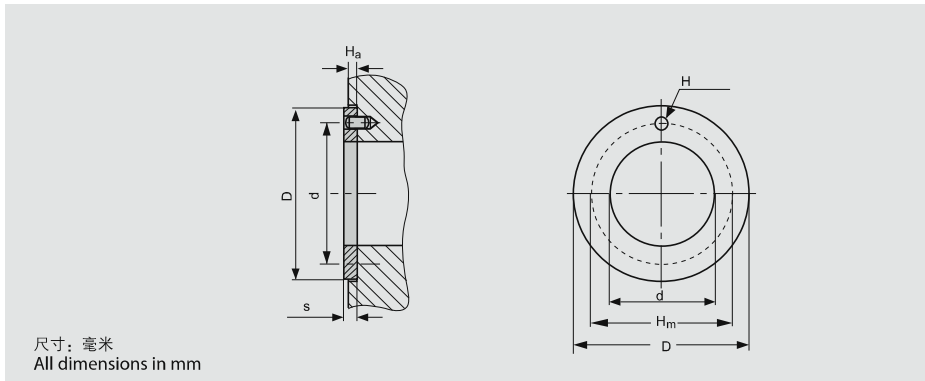
内径 Internal Diameter			外径 External Diameter		高度 Width	壁厚 Wall Thickness	油孔直径 Oil Hole- $\Phi$ H	型号 Part No
内径 d	装配轴径 Shaft- $\Phi d_s$	供货内径 $\Phi d_i$	外径 D	装配座孔 $D_H$	$L \pm 0.01''$	S		
7/8	0.8639 0.8627	0.8694 0.8662	1	1.0008 1.0000	0.750	0.0669 0.0657	1/4	14 EX 12
					0.755			14 EX 14
					1			14 EX 16
0.750	16 EX 12							
1	16 EX 16							
1.500	16 EX 24							
1 1/8	1.1138 1.1126	1.1202 1.1164	1 9/32	1.2822 1.2812	0.750	0.0824 0.0810		18 EX 12
					1			18 EX 16
1 1/4	1.2387 1.2371	1.2452 1.2414	1 13/32	1.4072 1.4062	0.750			20 EX 12
					1			20 EX 16
					1.250			20 EX 20
					1.750			20 EX 28
1 3/8	1.3635 1.3619	1.3702 1.3664	1 17/32	1.5322 1.5312	1		22 EX 16	
					1.375		22 EX 22	
					1.750		22 EX 28	
1 1/2	1.4884 1.4868	1.4952 1.4914	1 21/32	1.6572 1.6562	1		24 EX 16	
					1.250		24 EX 20	
					1.500		24 EX 24	
					2	24 EX 32		
1 5/8	1.6133 1.6117	1.6202 1.6164	1 25/32	1.7822 1.7812	1	26 EX 16		
					1.500	26 EX 24		
1 3/4	1.7383 1.7367	1.7461 1.7415	1 15/16	1.9385 1.9375	1	28 EX 16		
					1.500	28 EX 24		
					1.750	28 EX 28		
					2	28 EX 32		
1 7/8	1.8632 1.8616	1.8713 1.8665	2 1/16	2.0637 2.0625	1.500	30 EX 16		
					1.875	30 EX 30		
					2.250	30 EX 36		
2	1.9881 1.9863	1.9963 1.9915	1 3/16	2.1887 2.1875	1	32 EX 16		
					1.500	32 EX 24		
					2	32 EX 32		
					2.500	32 EX 40		



内径 Internal Diameter			外径 External Diameter		高度 Width	壁厚 Wall Thickness	油孔直径 Oil Hole-Φ H	型号 Part No	
内径 d	装配轴径 Shaft-Φd <sub>s</sub>	供货内径 Φd <sub>i</sub>	外径 D	装配座孔 D <sub>H</sub>	L ± 0.01"	S			
2 <sup>1</sup> / <sub>4</sub>	2.2378 2.2360	2.2463 2.2415	2 <sup>7</sup> / <sub>16</sub>	2.4387 2.4375	2.010	0.0980 0.0962	5 <sup>5</sup> / <sub>16</sub>	36 EX 32	
					1.990			36 EX 36	
					2.260			36 EX 40	
2.240	40 EX 32								
2.510	40 EX 40								
2.490	44 EX 32								
2 <sup>1</sup> / <sub>2</sub>	2.4875 2.4857	2.4963 2.4915	2 <sup>11</sup> / <sub>16</sub>	2.6887 2.6875	2.010	0.0991 0.0965		44 EX 40	
					1.990			44 EX 48	
					2.510			44 EX 56	
2.490	48 EX 32								
2 <sup>3</sup> / <sub>4</sub>	2.7351 2.7333	2.7457 2.7393	2 <sup>15</sup> / <sub>16</sub>	2.9387 2.9375	2.010			3 <sup>3</sup> / <sub>8</sub>	48 EX 48
					1.990				48 EX 60
					2.510	56 EX 40			
					2.490	56 EX 48			
3	2.9849 2.9831	2.9959 2.9893	3 <sup>3</sup> / <sub>16</sub>	3.1889 3.1875	3.010	64 EX 48			
					2.990		64 EX 60		
					3.760		64 EX 76		
3.740	4	3.9839 3.9817	4 <sup>3</sup> / <sub>16</sub>	4.1889 4.1875	2.510				
2.490					3.010				
3.760					3.740				
3 <sup>1</sup> / <sub>2</sub>	3.4844 3.4822	3.4959 3.4893	3 <sup>11</sup> / <sub>16</sub>	3.6889 3.6875	3.010	4			
					2.990		3.760		
					3.760		3.740		
4	3.9839 3.9817	3.9959 3.9893	4 <sup>3</sup> / <sub>16</sub>	4.1889 4.1875	3.010		4		
					2.990			3.760	
					3.760			3.740	
4	3.9839 3.9817	3.9959 3.9893	4 <sup>3</sup> / <sub>16</sub>	4.1889 4.1875	4.760	4			
					2.990			4.740	
					3.760			4.740	



## 5.12 EX 英制垫片规格及公差 EX Inch Thrust washer Specification & Tolerance



### 垫片型号标注方式

#### Washer Symbol

垫片型号标注方式 Washer Symbol	EX - □	WC	× ×
垫片型号 Washer Type			
垫片 Washer			
垫片内径 Washer I. D.			

内孔 Nominal Diameter Φ d		外径 Outside Φ D		壁厚 Thickness s	装配孔大小 Dowel hole Φ H	装配孔中心距 Dowel Hole PCD Φ H <sub>m</sub>	装配深度 Recess Depth H <sub>a</sub>	型号 Part No
min.	max.	min.	max.	max. min.	max. min.	± 0.005"	max. min.	
0.500	0.510	0.865	0.875	0.0660 0.0625	0.077 0.067	0.6870	0.050 0.040	EX 06
0.562	0.572	0.990	1.000		0.109 0.099	0.7810		EX 07
0.625	0.635	1.115	1.125		0.140 0.130	0.8750		EX 08
0.687	0.697	1.177	1.187		0.171 0.161	0.9370		EX 09
0.750	0.760	1.240	1.250		0.202 0.192	1.0000		EX 10
0.812	0.822	1.365	1.375		0.202 0.192	1.0940		EX 11
0.875	0.885	1.490	1.500		0.202 0.192	1.1870		EX 12
1.000	1.010	1.740	1.750		0.202 0.192	1.3750		EX 14
1.125	1.135	1.990	2.000		0.202 0.192	1.5620		EX 16
1.250	1.260	2.115	2.125		0.202 0.192	1.6870		EX 18
1.375	1.385	2.240	2.250		0.202 0.192	1.8020		EX 20
1.500	1.510	2.490	2.500		0.202 0.192	2.0000		EX 22
1.625	1.635	2.615	2.625		0.202 0.192	2.1250		EX 24
1.750	1.760	2.740	2.750		0.202 0.192	2.2500		EX 26
2.000	2.010	2.990	3.000	0.0970 0.0935	2.5000	0.080 0.070	EX 28	
2.125	2.135	3.115	3.125	0.0970 0.0935	2.6250	0.080 0.070	EX 30	
2.250	2.260	3.240	3.250	0.0970 0.0935	2.7500	0.080 0.070	EX 32	