Paliers CSB-40

1 Surface de glissement PTFE/Fibres organiques épaisseur 0,01-0,03 mm, apporte les propriétés tribologiques pour établir la propriété d'autolubrification

2 Couche de poudre de bronze fritté épaisseur 0,20-0,35 mm assure la liaison mécanique entre le support et la surface de glissement.

3 Support en acier assure la résistance mécanique.

Caractéristiques

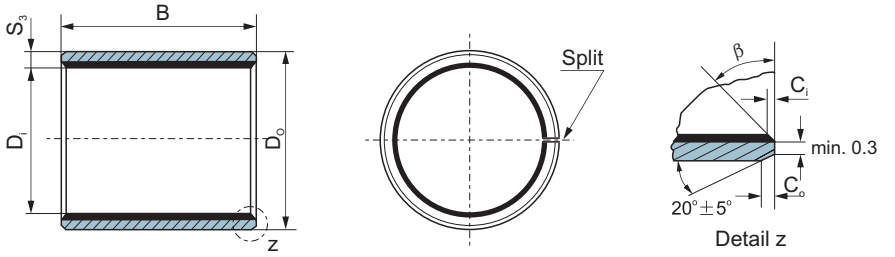
Le palier autolubrifiant CSB-40 et ses dérivés présentent une bonne résistance à l'usure, un faible coefficient de frottement sous diverses charges, vitesses et températures. Il a une bonne résistance à la cavitation, Il convient aux applications lubrifiées limite et hydrodynamiques. Recommandé pour des mouvements rotatifs.

Propriétés du palier		Unité	Valeur
Pression spécifique	Statique	N/mm^2	250
	Dynamique	N/mm^2	140
Température de fonctionnement	Maxi	°C	+280
	Mini	°C	-195
Vitesse de glissement	à sec	m/s	2,0
	Lubrifié	m/s	≥ 2,0
Facteur « pv » à sec		N/mm^2 x m/s	1,8
Coefficient de frottement à sec			0,08-0,20
Conductibilité thermique		$W(m*K)^{-1}$	42
Coefficient de dilatation thermique		$10^{-6}/K$	11
Rugosité de l'arbre	Rectifié	Ra	<0,4
Dureté de l'arbre	Mini	HB	> 200

Applications

Ce matériau convient aux applications dans les systèmes de suspension, les amortisseurs, les systèmes de direction et les boîtes de vitesses des véhicules. Il est également largement utilisé dans les moteurs hydrauliques, les pompes à engrenages, les pompes à pistons, les pompes à palettes, les vérins hydrauliques et les engins de manutention, ...

CSB-40 Metric Cylindrical Bushes



ID and OD chamfers

S_3	C_O	C_i	β
0.75	0.5±0.3	0.25±0.2	30° ±5°
1.00	0.6±0.3	0.30±0.2	30° ±5°
1.50	0.7±0.3	0.50±0.3	30° ±5°

S_3	C_O	C_i	β
2.00	1.2±0.4	0.50±0.3	30° ±5°
2.50	1.8±0.6	0.60±0.3	45° ±5°

Unit:mm

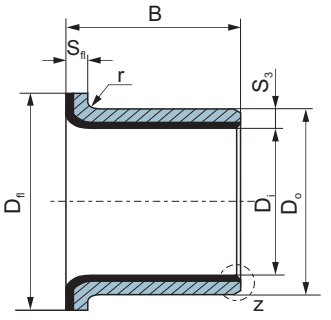
Shaft D_S	Housing H7 D_H	OD tolerance D_O	ID after fixed $D_{i,a}$	Clearance C_D	Wall thick-ness S_3	B $^{0}_{-0.40}$ (d≤ϕ30 B-0.3 / d>ϕ30 B-0.4)									
						6	8	10	12	15	20	25	30	40	50
6 $^{-0.010}_{-0.022}$	8 $^{+0.015}$	8 $^{+0.055}_{+0.025}$	6.055 5.990	0.077 0.000	1.005 0.980	CSB-40 0606	CSB-40 0608	CSB-40 0610							
8 $^{-0.013}_{-0.028}$	10 $^{+0.015}$	10 $^{+0.055}_{+0.025}$	8.055 7.990	0.083 0.003		CSB-40 0806	CSB-40 0808	CSB-40 0810	CSB-40 0812	CSB-40 0815					
10 $^{-0.013}_{-0.028}$	12 $^{+0.018}$	12 $^{+0.065}_{+0.030}$	10.058 9.990	0.086 0.003		CSB-40 1006	CSB-40 1008	CSB-40 1010	CSB-40 1012	CSB-40 1015	CSB-40 1020				
12 $^{-0.016}_{-0.034}$	14 $^{+0.018}$	14 $^{+0.065}_{+0.030}$	12.058 11.990	0.092 0.006		CSB-40 1206	CSB-40 1208	CSB-40 1210	CSB-40 1212	CSB-40 1215	CSB-40 1220	CSB-40 1225			
13 $^{-0.016}_{-0.034}$	15 $^{+0.018}$	15 $^{+0.065}_{+0.030}$	13.058 12.990					CSB-40 1310			CSB-40 1320				
14 $^{-0.016}_{-0.034}$	16 $^{+0.018}$	16 $^{+0.065}_{+0.030}$	14.058 13.990					CSB-40 1410	CSB-40 1412	CSB-40 1415	CSB-40 1420	CSB-40 1425			
15 $^{-0.016}_{-0.034}$	17 $^{+0.018}$	17 $^{+0.065}_{+0.030}$	15.058 14.990					CSB-40 1510	CSB-40 1512	CSB-40 1515	CSB-40 1520	CSB-40 1525			
16 $^{-0.016}_{-0.034}$	18 $^{+0.018}$	18 $^{+0.065}_{+0.030}$	16.058 15.990					CSB-40 1610	CSB-40 1612	CSB-40 1615	CSB-40 1620	CSB-40 1625			
17 $^{-0.016}_{-0.034}$	19 $^{+0.021}$	19 $^{+0.075}_{+0.035}$	17.061 16.990	0.095 0.006				CSB-40 1710	CSB-40 1712		CSB-40 1720				
18 $^{-0.016}_{-0.034}$	20 $^{+0.021}$	20 $^{+0.075}_{+0.035}$	18.061 17.990					CSB-40 1810	CSB-40 1812	CSB-40 1815	CSB-40 1820	CSB-40 1825			
20 $^{-0.020}_{-0.041}$	23 $^{+0.021}$	23 $^{+0.075}_{+0.035}$	20.071 19.990	0.112 0.010	1.505 1.475			CSB-40 2010	CSB-40 2012	CSB-40 2015	CSB-40 2020	CSB-40 2025	CSB-40 2030		
22 $^{-0.020}_{-0.041}$	25 $^{+0.021}$	25 $^{+0.075}_{+0.035}$	22.071 21.990					CSB-40 2210	CSB-40 2212	CSB-40 2215	CSB-40 2220	CSB-40 2225	CSB-40 2230		
24 $^{-0.020}_{-0.041}$	27 $^{+0.021}$	27 $^{+0.075}_{+0.035}$	24.071 23.990							CSB-40 2415	CSB-40 2420	CSB-40 2425	CSB-40 2430		
25 $^{-0.020}_{-0.041}$	28 $^{+0.021}$	28 $^{+0.075}_{+0.035}$	25.071 24.990					CSB-40 2510	CSB-40 2512	CSB-40 2515	CSB-40 2520	CSB-40 2525	CSB-40 2530	CSB-40 2540	CSB-40 2550
28 $^{-0.020}_{-0.041}$	32 $^{+0.025}$	32 $^{+0.085}_{+0.045}$	28.085 27.990	0.126 0.010	2.005 1.970					CSB-40 2815	CSB-40 2820	CSB-40 2825	CSB-40 2830	CSB-40 2840	
30 $^{-0.020}_{-0.041}$	34 $^{+0.025}$	34 $^{+0.085}_{+0.045}$	30.085 29.990						CSB-40 3012	CSB-40 3015	CSB-40 3020	CSB-40 3025	CSB-40 3030	CSB-40 3040	
32 $^{-0.025}_{-0.050}$	36 $^{+0.025}$	36 $^{+0.085}_{+0.045}$	32.085 31.990	0.135 0.015							CSB-40 3220		CSB-40 3230	CSB-40 3240	
35 $^{-0.025}_{-0.050}$	39 $^{+0.025}$	39 $^{+0.085}_{+0.045}$	35.085 34.990						CSB-40 3512	CSB-40 3515	CSB-40 3520	CSB-40 3525	CSB-40 3530	CSB-40 3540	CSB-40 3550
38 $^{-0.025}_{-0.050}$	42 $^{+0.025}$	42 $^{+0.085}_{+0.045}$	38.085 37.990							CSB-40 3815			CSB-40 3830	CSB-40 3840	
40 $^{-0.025}_{-0.050}$	44 $^{+0.025}$	44 $^{+0.085}_{+0.045}$	40.085 39.990						CSB-40 4012		CSB-40 4020	CSB-40 4025	CSB-40 4030	CSB-40 4040	CSB-40 4050

CSB-40 Metric Cylindrical Bushes

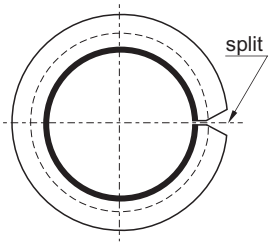
Unit:mm

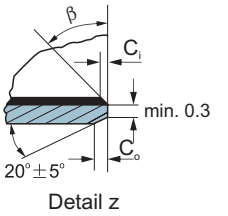
Shaft D_S	Housing H7 D_H	OD tolerance D_O	ID after fixed $D_{i,a}$	Clearance C_D	Wall thickness S_3	B $^{0}_{-0.40}$									
						20	25	30	40	50	60	70	80	100	115
45 $^{-0.050}_{-0.025}$	50 $^{+0.025}$	50 $^{+0.085}_{+0.045}$	45.105 44.990	0.155 0.015	2.505 2.460	CSB-40 4520	CSB-40 4525	CSB-40 4530	CSB-40 4540	CSB-40 4550					
50 $^{-0.050}_{-0.025}$	55 $^{+0.030}$	55 $^{+0.100}_{+0.055}$	50.110 49.990	0.160 0.015		CSB-40 5020		CSB-40 5030	CSB-40 5040	CSB-40 5050	CSB-40 5060				
55 $^{-0.060}_{-0.030}$	60 $^{+0.030}$	60 $^{+0.100}_{+0.055}$	55.110 54.990					CSB-40 5530	CSB-40 5540	CSB-40 5550	CSB-40 5560				
60 $^{-0.060}_{-0.030}$	65 $^{+0.030}$	65 $^{+0.100}_{+0.055}$	60.110 59.990					CSB-40 6030	CSB-40 6040	CSB-40 6050	CSB-40 6060	CSB-40 6070			
65 $^{-0.060}_{-0.030}$	70 $^{+0.030}$	70 $^{+0.100}_{+0.055}$	65.110 64.990	0.170 0.020				CSB-40 6530	CSB-40 6540	CSB-40 6550	CSB-40 6560	CSB-40 6570			
70 $^{-0.060}_{-0.030}$	75 $^{+0.030}$	75 $^{+0.100}_{+0.055}$	70.110 69.990						CSB-40 7040	CSB-40 7050	CSB-40 7060	CSB-40 7070	CSB-40 7080		
75 $^{-0.060}_{-0.030}$	80 $^{+0.030}$	80 $^{+0.100}_{+0.055}$	75.110 74.990					CSB-40 7530	CSB-40 7540	CSB-40 7550	CSB-40 7560	CSB-40 7570	CSB-40 7580		
80 $^{}_{-0.046}$	85 $^{+0.035}$	85 $^{+0.120}_{+0.070}$	80.155 80.020	0.201 0.020	2.490 2.440				CSB-40 8040	CSB-40 8050	CSB-40 8060	CSB-40 8070	CSB-40 8080	CSB-40 80100	
85 $^{}_{-0.054}$	90 $^{+0.035}$	90 $^{+0.120}_{+0.070}$	85.155 85.020	0.209 0.020					CSB-40 8540		CSB-40 8560		CSB-40 8580	CSB-40 85100	
90 $^{}_{-0.054}$	95 $^{+0.035}$	95 $^{+0.120}_{+0.070}$	90.155 90.020						CSB-40 9040	CSB-40 9050	CSB-40 9060		CSB-40 9080	CSB-40 90100	
95 $^{}_{-0.054}$	100 $^{+0.035}$	100 $^{+0.120}_{+0.070}$	95.155 95.020							CSB-40 9550	CSB-40 9560		CSB-40 9580	CSB-40 95100	
100 $^{}_{-0.054}$	105 $^{+0.035}$	105 $^{+0.120}_{+0.070}$	100.155 100.020							CSB-40 10050	CSB-40 10060		CSB-40 10080		CSB-40 100115
105 $^{}_{-0.054}$	110 $^{+0.035}$	110 $^{+0.120}_{+0.070}$	105.155 105.020								CSB-40 10560		CSB-40 10580		CSB-40 105115
110 $^{}_{-0.054}$	115 $^{+0.035}$	115 $^{+0.120}_{+0.070}$	110.155 110.020								CSB-40 11060		CSB-40 11080		CSB-40 110115
120 $^{}_{-0.054}$	125 $^{+0.040}$	125 $^{+0.170}_{+0.100}$	120.210 120.070	0.264 0.070	2.465 2.415						CSB-40 12060		CSB-40 12080	CSB-40 120100	
125 $^{}_{-0.063}$	130 $^{+0.040}$	130 $^{+0.170}_{+0.100}$	125.210 125.070	0.273 0.070							CSB-40 12560			CSB-40 125100	CSB-40 125115
130 $^{}_{-0.063}$	135 $^{+0.040}$	135 $^{+0.170}_{+0.100}$	130.210 130.070								CSB-40 13060		CSB-40 13080	CSB-40 130100	
140 $^{}_{-0.063}$	145 $^{+0.040}$	145 $^{+0.170}_{+0.100}$	140.210 140.070								CSB-40 14060		CSB-40 14080	CSB-40 140100	
150 $^{}_{-0.063}$	155 $^{+0.040}$	155 $^{+0.170}_{+0.100}$	150.210 150.070								CSB-40 15060		CSB-40 15080	CSB-40 150100	
160 $^{}_{-0.063}$	165 $^{+0.040}$	165 $^{+0.170}_{+0.100}$	160.210 160.070								CSB-40 16060		CSB-40 16080	CSB-40 160100	CSB-40 160115
180 $^{}_{-0.063}$	185 $^{+0.046}$	185 $^{+0.210}_{+0.130}$	180.216 180.070	0.279 0.070	2.465 2.415								CSB-40 18080	CSB-40 180100	
190 $^{}_{-0.072}$	195 $^{+0.046}$	195 $^{+0.210}_{+0.130}$	190.216 190.070	0.288 0.070									CSB-40 19080	CSB-40 190100	
200 $^{}_{-0.072}$	205 $^{+0.046}$	205 $^{+0.210}_{+0.130}$	200.216 200.070								CSB-40 20060		CSB-40 20080	CSB-40 200100	
220 $^{}_{-0.072}$	225 $^{+0.046}$	225 $^{+0.210}_{+0.130}$	220.216 220.070										CSB-40 22080	CSB-40 220100	
250 $^{}_{-0.072}$	255 $^{+0.052}$	255 $^{+0.260}_{+0.170}$	250.222 250.070	0.294 0.070	2.465 2.415								CSB-40 25080	CSB-40 250100	
260 $^{}_{-0.081}$	265 $^{+0.052}$	265 $^{+0.260}_{+0.170}$	260.222 260.070	0.303 0.070									CSB-40 26080	CSB-40 260100	
280 $^{}_{-0.081}$	285 $^{+0.052}$	285 $^{+0.260}_{+0.170}$	280.222 280.070										CSB-40 28080	CSB-40 280100	
300 $^{}_{-0.081}$	305 $^{+0.052}$	305 $^{+0.260}_{+0.170}$	300.222 300.070										CSB-40 30080	CSB-40 300100	

CSB-40 Metric Flange Bushes



S_3	1.0	1.5	2.0	2.5
r	$1^{-0.5}$	1±0.5	1.5±0.5	2±0.5



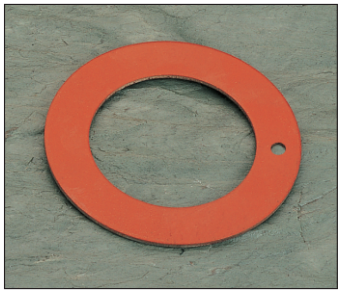


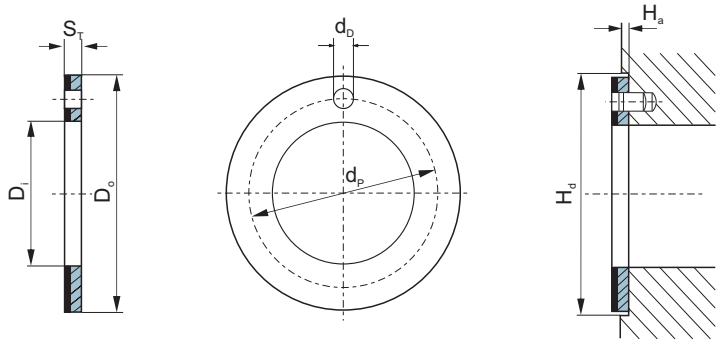
Unit:mm

Shaft D_S	Housing H7 D_H	OD tolerance D_O	ID after fixed $D_{i,a}$	Clearance C_D	Designation	Wall thickness S_3	Dimension				
							D_i	D_o	D_{fl}± 0.5	B±0.25	S_{fl}-0.2
6 -0.013 -0.028	8 +0.015	8 +0.055 +0.025	6.055 5.990	0.077 0.000	CSB-40F06040	1.005 0.980	6	8	12	4	1
					CSB-40F06070					7	
8 -0.013 -0.028	10 +0.015	10 +0.055 +0.025	8.055 7.990	0.083 0.003	CSB-40F08055		8	10	15	5.5	
					CSB-40F08075					7.5	
10 -0.016 -0.034	12 +0.018	12 +0.055 +0.025	10.058 9.990	0.086 0.003	CSB-40F10070		10	12	18	7	
					CSB-40F10090					9	
					CSB-40F10120					12	
12 -0.016 -0.034	14 +0.018	14 +0.065 +0.030	12.058 11.990	0.092 0.006	CSB-40F12070		12	14	20	7	
					CSB-40F12090					9	
					CSB-40F12120					12	
14 -0.016 -0.034	16 +0.018	16 +0.065 +0.030	14.058 13.990		CSB-40F14120		14	16	22	12	
					CSB-40F14170					17	
15 -0.016 -0.034	17 +0.018	17 +0.065 +0.030	15.058 14.990		CSB-40F15090		15	17	23	9	
					CSB-40F15120					12	
					CSB-40F15170					17	
16 -0.016 -0.034	18 +0.018	18 +0.065 +0.030	16.058 15.990		CSB-40F16120		16	18	24	12	
					CSB-40F16170					17	
18 -0.016 -0.034	20 +0.021	20 +0.075 +0.035	18.061 17.990	0.095 0.006	CSB-40F18120		18	20	26	12	
					CSB-40F18170					17	
					CSB-40F18200					20	
20 -0.020 -0.041	23 +0.021	23 +0.075 +0.035	20.071 19.990	0.112 0.010	CSB-40F20115	1.505 1.475	20	23	30	11.5	1.5
					CSB-40F20165					16.5	
					CSB-40F20215					21.5	
22 -0.020 -0.041	25 +0.021	25 +0.075 +0.035	22.071 21.990		CSB-40F22150		22	25	32	15	
					CSB-40F22200					20	
25 -0.020 -0.041	28 +0.021	28 +0.075 +0.035	25.071 24.990		CSB-40F25115		25	28	35	11.5	
					CSB-40F25165					16.5	
					CSB-40F25215					21.5	
30 -0.025 -0.050	34 +0.025	34 +0.075 +0.035	30.085 29.990	0.126 0.010	CSB-40F30160	2.005 1.970	30	34	42	16	2
					CSB-40F30260					26	
35 -0.025 -0.050	39 +0.025	39 +0.085 +0.045	35.085 34.990	0.135 0.015	CSB-40F35160		35	39	47	16	
					CSB-40F35260					26	
40 -0.025 -0.050	44 +0.025	44 +0.085 +0.045	40.085 39.990		CSB-40F40260		40	44	53	26	
					CSB-40F40400					40	

CSB-40 Metric Thrust Washer and Strip

Metric thrust washer

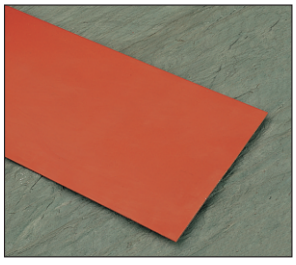


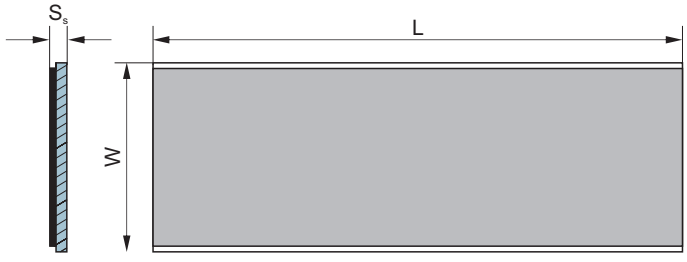


Unit:mm

Shaft D_S	Designation	Washer dimension				Installation size		H_d+0.12
		D_i +0.25	D_o -0.25	S_T -0.05	d_P±0.125	$d_D^{+0.4}_{+0.1}$	H_a±0.2	
8	CSB-40WC10	10	20	1.5	15	1.5	1	20
10	CSB-40WC12	12	24		18			24
12	CSB-40WC14	14	26		20	2		26
14	CSB-40WC16	16	30		23			30
16	CSB-40WC18	18	32		25			32
18	CSB-40WC20	20	36		28	3		36
20	CSB-40WC22	22	38		30			38
22	CSB-40WC24	24	42		33			42
24	CSB-40WC26	26	44		35			44
26	CSB-40WC28	28	48		38	4		48
30	CSB-40WC32	32	54		43			54
36	CSB-40WC38	38	62		50			62
40	CSB-40WC42	42	66		54			66
46	CSB-40WC48	48	74	2	61		1.5	74
50	CSB-40WC52	52	78		65			78
60	CSB-40WC62	62	90		76			90

Metric standard strip





Unit:mm

Type	Length±1	Width±1	Thickness -0.05
CSB-40SP	500	150	1.0
CSB-40SP	500	150	1.5
CSB-40SP	500	150	2.0
CSB-40SP	500	150	2.5