

## Bronze Wrapped Bearings



### Product Brief

The bearings are made completely of bronze (CuSn8). The working surface is provided with diamond shape indentations all over its sliding surface. These indentations serve as lubricant reservoirs to build up a lubrication film at the start of movement and then reduce the running friction. They are intended to be lubricated with grease or oil.

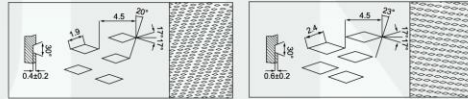
### Features

1. High load capacity
2. Insensitive to dirty environments
3. Resistant to corrosive conditions
4. High level thermal conductivity
5. Initial pre-lubrication at assembly required

### Chemical Compositions

Material	Cu%	Sn%	P%	Pb%	Zn%
CuSn8	91.3	8.5	0.2	/	/

### Oil Pocket Type



Inside Dia. ≤ Φ22

Inside Dia. > Φ22

### Tech. Data

Max. Load	Static	120N/mm <sup>2</sup>
	Low speed	40N/mm <sup>2</sup>
Max. speed(Lubrication)	2m/s	
Max. PV	2.8N/mm <sup>2</sup> ·m/s	
Tensile strength	450N/mm <sup>2</sup>	
Hardness	HB 110-150	

Elongaion	40%
Temp.	-100°C~ + 200°C
Friction coefficient	0.08~0.25
Thermal conductivity	58W(m*k) <sup>-1</sup>
Coef. of thermal expansion	18.5*10 <sup>-6</sup> *k <sup>-1</sup>

### Bushes Tolerance

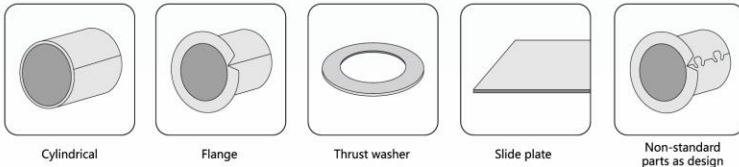
I.D.	10<d≤18	18<d≤30	30<d≤50	50<d≤80	80<d≤120	120<d≤180	180<d≤250	250<d≤300
O.D tolerance	+0.065 +0.030	+0.075 +0.035	+0.085 +0.045	+0.100 +0.055	+0.120 +0.070	+0.170 +0.100	+0.210 +0.130	+0.260 +0.170
Installed I.D.H9	+0.043 0	+0.052 0	+0.062 0	+0.074 0	+0.087 0	+0.100 +0.100	+0.130 0	+0.130 0

Housing: H7, Shaft: d7

### Typical Applications

Construction machinery, Hoisting equipment, Agricultural machinery, Forest machinery, Tractors, Machines tools, Mineral engines, Trucks

### Availability



Cylindrical

Flange

Thrust washer

Slide plate

Non-standard parts as design

## Bronze Wrapped Bearings with Graphite



### Product Brief

The bearings are similar to B90, except there are solid lubricants embedded into the diamond shaped lubrication indents on the bearing surface, which provide good lubrication conditions at the start up stage, even with a lack of oil.

### Features

1. Can work under dry/marginal lubrication for short period, lower friction factor at initial moving
2. High load capacity
3. Insensitive to dirty environments
4. Resistant to corrosive conditions
5. High level thermal conductivity
6. Initial pre-lubrication at assembly required

### Chemical Compositions

Material	Cu%	Sn%	P%	Pb%	Zn%
CuSn8	91.3	8.5	0.2	/	/

### Tech. Data

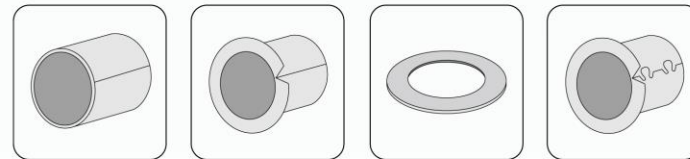
Max. Load	Static	120N/mm <sup>2</sup>
	Low speed	40N/mm <sup>2</sup>
Max. speed(Lubrication)	2m/s	
Max. PV	2.8N/mm <sup>2</sup> ·m/s	
Tensile strength	450N/mm <sup>2</sup>	
Hardness	HB 110-150	

Elongaion	40%
Temp.	-100°C~ + 200°C
Friction coefficient	0.08~0.25
Thermal conductivity	58W(m*k) <sup>-1</sup>
Coef. of thermal expansion	18.5*10 <sup>-6</sup> *k <sup>-1</sup>

### Typical Applications

Construction machinery, Gear boxes, Automotive clutch parts, Mineral Engines, machines tools, automobiles, Trucks

### Availability



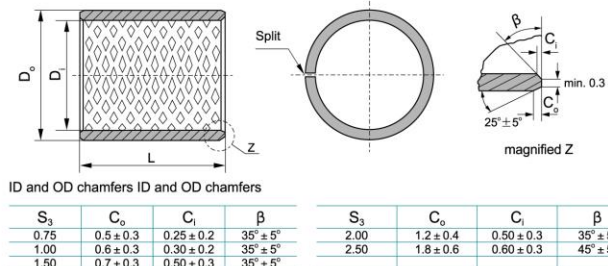
Cylindrical

Flange

Thrust washer

Non-standard parts as design

Metric Standard Cylindrical Bearings Size



ID and OD chamfers ID and OD chamfers

S <sub>3</sub>	C <sub>o</sub>	C <sub>i</sub>	β	S <sub>3</sub>	C <sub>o</sub>	C <sub>i</sub>	β
0.75	0.5 ± 0.3	0.25 ± 0.2	35° ± 5°	2.00	1.2 ± 0.4	0.50 ± 0.3	35° ± 5°
1.00	0.6 ± 0.3	0.30 ± 0.2	35° ± 5°	2.50	1.8 ± 0.6	0.60 ± 0.3	45° ± 5°
1.50	0.7 ± 0.3	0.50 ± 0.3	35° ± 5°				

Unit: mm

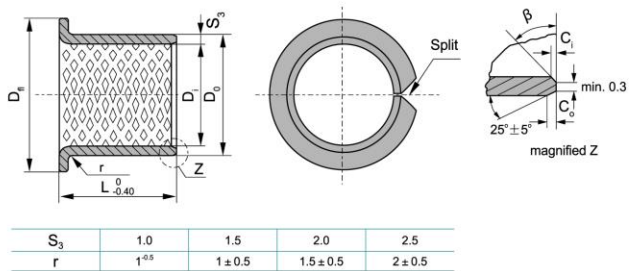
D <sub>i</sub> φ d	D <sub>o</sub> φ D	Length <sup>0</sup> <sub>-0.40</sub>																					
		10	15	20	25	30	35	40	50	60	70	80	90	100									
10	12	1010	1015	1020																			
12	14	1210	1215	1220																			
14	16	1410	1415	1420	1425																		
15	17	1510	1515	1520	1525																		
16	18	1610	1615	1620	1625																		
18	20	1810	1815	1820	1825																		
20	23	2010	2015	2020	2025																		
22	25	2210	2215	2220	2225	2230																	
24	27		2415	2420	2425	2430																	
25	28		2515	2520	2525	2530																	
28	31		2815	2820	2825	2830																	
30	34		3015	3020	3025	3030	3035	3040															
32	36		3215	3220	3225	3230	3235	3240															
35	39		3515	3520	3525	3530	3535	3540															
40	44			4020	4025	4030	4035	4040	4050														
45	50			4520	4525	4530	4535	4540	4550														
50	55			5020	5025	5030	5035	5040	5050	5060													
55	60			5520	5525	5530	5535	5540	5550	5560													
60	65				6025	6030	6035	6040	6050	6060	6070												
65	70					6530	6535	6540	6550	6560	6570												
70	75					7030	7035	7040	7050	7060	7070	7080											
75	80					7530	7535	7540	7550	7560	7570	7580											
80	85					8030	8035	8040	8050	8060	8070	8080											
85	90					8530	8535	8540	8550	8560	8570	8580	8590										
90	95					9030	9035	9040	9050	9060	9070	9080	9090										
95	100							9540	9550	9560	9570	9580	9590	95100									

Metric Standard Cylindrical Bearings Size

Unit: mm

D <sub>i</sub> φ d	D <sub>o</sub> φ D	Length <sup>0</sup> <sub>-0.40</sub>																				
		25	30	35	40	50	60	70	80	90	100											
100	105					10050	10060	10070	10080	10090	100100											
105	110					10550	10560	10570	10580	10590	105100											
110	115					11050	11060	11070	11080	11090	110100											
115	120					11550	11560	11570	11580	11590	115100											
120	125						12060	12070	12080	12090	120100											
125	130						12560	12570	12580	12590	125100											
130	135						13060	13070	13080	13090	130100											
135	140						13560	13570	13580	13590	135100											
140	145						14060	14070	14080	14090	140100											
145	150						14560	14570	14580	14590	145100											
150	155						15060	15070	15080	15090	150100											
155	160						15560	15570	15580	15590	155100											
160	165						16060	16070	16080	16090	160100											
165	170						16560	16570	16580	16590	165100											
170	175						17060	17070	17080	17090	170100											
175	180						17560	17570	17580	17590	175100											
180	185						18060	18070	18080	18090	180100											
185	190						18560	18570	18580	18590	185100											
190	195						19060	19070	19080	19090	190100											
195	200						19560	19570	19580	19590	195100											
200	205						20060	20070	20080	20090	200100											
205	210						20560	20570	20580	20590	205100											
215	220						21560	21570	21580	21590	215100											
225	230						22560	22570	22580	22590	225100											
230	235						23060	23070	23080	23090	230100											
240	245						24060	24070	24080	24090	240100											
250	255						25060	25070	25080	25090	250100											
260	265						26060	26070	26080	26090	260100											
270	275						27060	27070	27080	27090	270100											
280	285						28060	28070	28080	28090	280100											
290	295						29060	29070	29080	29090	290100											
300	305						30060	30070	30080	30090	300100											

Metric Standard Flanged Bearings Size



Unit: mm

D <sub>i</sub> φ d	D <sub>o</sub> φ D	D <sub>n</sub>	Length <sup>0</sup> <sub>-0.40</sub>														
			15	20	25	30	35	40	50	60	70	80	90				
25	28	35	25150	25200	25250												
30	34	45		30200	30250	30300											
35	39	50		35200	35250	35300	35350										
40	44	55			40250	40300	40350	40400									
45	50	60				45300	45350	45400	45500								
50	55	65				50300	50350	50400	50500								
55	60	70				55300	55350	55400	55500								
60	65	75				60300	60350	60400	60500	60600							
65	70	80				65300	65350	65400	65500	65600							
70	75	85					70350	70400	70500	70600	70700						
75	80	90					75350	75400	75500	75600	75700						
80	85	100						80350	80400	80500	80600	80700	80800				
90	95	110								90500	90600	90700	90800	90900			
100	105	120									100500	100600	100700	100800	100900		
110	115	130									110500	110600	110700	110800	110900		
120	125	140									120500	120600	120700	120800	120900		
130	135	155										130600	130700	130800	130900		
140	145	165										140600	140700	140800	140900		
150	155	180										150600	150700	150800	150900		
160	165	190										160600	160700	160800	160900		
170	175	200										170600	170700	170800	170900		
180	185	215										180600	180700	180800	180900		
190	195	225										190600	190700	190800	190900		
200	205	235										200600	200700	200800	200900		
225	230	260										225600	225700	225800	225900		
250	255	290										250600	250700	250800	250900		
265	270	305										265600	265700	265800	265900		
285	290	325										285600	285700	285800	285900		
300	305	340										300600	300700	300800	300900		

Bronze Wrapped Bearings with Holes



Product Brief

The bearings are similar to B90, except there are holes, which are dispersed in a special way over the whole bearing surface. These holes serve as lubricant reservoirs to rapidly build up a lubrication film at the start of movement and thereafter reduce the running friction.

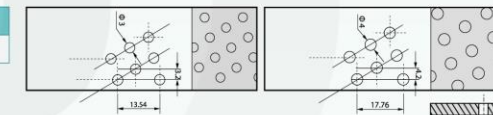
Features

1. Suitable for high load and slow movement occur
2. Extended service life and lubrication intervals than ZTOM90 bearing
3. High load capacity
4. Insensitive to dirty environments
5. Resistant to corrosive conditions
6. High level thermal conductivity
7. Initial pre-lubrication at assembly required

Chemical Compositions

Material	Cu%	Sn%	P%	Pb%	Zn%
CuSn8	91.3	8.5	0.2	/	/

Oil Pocket Type



Tech. Data

Max. Load	Static	120N/mm <sup>2</sup>
	Low speed	40N/mm <sup>2</sup>
Max. speed(Lubrication)		2m/s
Max. PV		2.8N/mm <sup>2</sup> ·m/s
Tensile strength		450N/mm <sup>2</sup>
Hardness		HB 110-150

Inside Dia. ≤ Φ25

Inside Dia. > Φ25

Elongaion	40%
Temp.	-100°C ~ +200°C
Friction coefficient	0.08~0.25
Thermal conductivity	58W(m <sup>2</sup> k) <sup>-1</sup>
Coef. of thermal expansion	18.5*10 <sup>-6</sup> *k <sup>-1</sup>

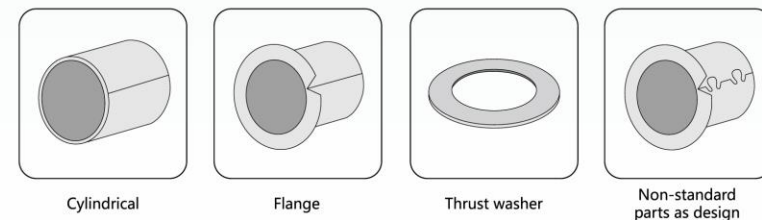
Bearings Tolerance

I.D.	10<d≤18	18<d≤30	30<d≤50	50<d≤80	80<d≤120	120<d≤180	180<d≤250	250<d≤300
O.D tolerance	+0.065 +0.030	+0.075 +0.035	+0.085 +0.045	+0.100 +0.055	+0.120 +0.070	+0.170 +0.100	+0.210 +0.130	+0.260 +0.170
Installed I.D.H9	+0.043 0	+0.052 0	+0.062 0	+0.074 0	+0.087 0	+0.100 0	+0.100 0	+0.130 0

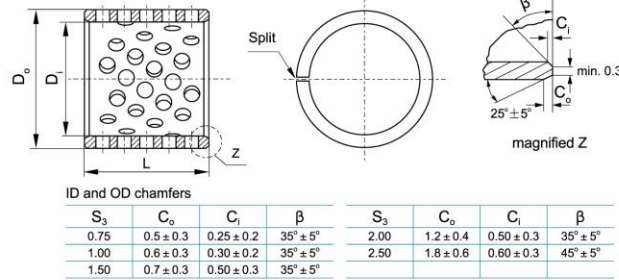
Housing: H7, Shaft: d7

Typical Applications

Construction machinery, Gear boxes, Automotive clutch parts, Mineral Engines, Machines tools, Automobiles, Truck.



Metric Standard Cylindrical Bearings Size



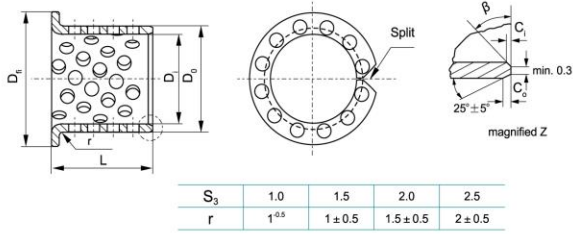
D <sub>i</sub> φ d	D <sub>o</sub> φ D	Length <sup>0</sup> <sub>-0.40</sub>													
		10	15	20	25	30	35	40	50	60	70	80	90	100	
10	12	1010	1015	1020											
12	14	1210	1215	1220											
14	16	1410	1415	1420	1425										
15	17	1510	1515	1520	1525										
16	18	1610	1615	1620	1625										
18	20	1810	1815	1820	1825										
20	23	2010	2015	2020	2025										
22	25	2210	2215	2220	2225	2230									
24	27		2415	2420	2425	2430									
25	28		2515	2520	2525	2530									
28	31		2815	2820	2825	2830									
30	34		3015	3020	3025	3030	3035	3040							
32	36		3215	3220	3225	3230	3235	3240							
35	39		3515	3520	3525	3530	3535	3540							
40	44			4020	4025	4030	4035	4040	4050						
45	50			4520	4525	4530	4535	4540	4550						
50	55			5020	5025	5030	5035	5040	5050	5060					
55	60			5520	5525	5530	5535	5540	5550	5560					
60	65				6025	6030	6035	6040	6050	6060	6070				
65	70					6530	6535	6540	6550	6560	6570				
70	75					7030	7035	7040	7050	7060	7070	7080			
75	80					7530	7535	7540	7550	7560	7570	7580			
80	85					8030	8035	8040	8050	8060	8070	8080			
85	90					8530	8535	8540	8550	8560	8570	8580	8590		
90	95					9030	9035	9040	9050	9060	9070	9080	9090		
95	100							9540	9550	9560	9570	9580	9590	95100	

Metric Standard Cylindrical Bearings Size

Unit:mm

D <sub>i</sub> φ d	D <sub>o</sub> φ D	Length <sup>0</sup> <sub>-0.40</sub>												
		25	30	35	40	50	60	70	80	90	100			
100	105					10050	10060	10070	10080	10090	100100			
105	110					10550	10560	10570	10580	10590	105100			
110	115					11050	11060	11070	11080	11090	110100			
115	120					11550	11560	11570	11580	11590	115100			
120	125						12060	12070	12080	12090	120100			
125	130						12560	12570	12580	12590	125100			
130	135						13060	13070	13080	13090	130100			
135	140						13560	13570	13580	13590	135100			
140	145						14060	14070	14080	14090	140100			
145	150						14560	14570	14580	14590	145100			
150	155						15060	15070	15080	15090	150100			
155	160						15560	15570	15580	15590	155100			
160	165						16060	16070	16080	16090	160100			
165	170						16560	16570	16580	16590	165100			
170	175						17060	17070	17080	17090	170100			
175	180						17560	17570	17580	17590	175100			
180	185						18060	18070	18080	18090	180100			
185	190						18560	18570	18580	18590	185100			
190	195						19060	19070	19080	19090	190100			
195	200						19560	19570	19580	19590	195100			
200	205						20060	20070	20080	20090	200100			
205	210						20560	20570	20580	20590	205100			
215	220						21560	21570	21580	21590	215100			
225	230						22560	22570	22580	22590	225100			
230	235						23060	23070	23080	23090	230100			
240	245						24060	24070	24080	24090	240100			
250	255						25060	25070	25080	25090	250100			
260	265						26060	26070	26080	26090	260100			
270	275						27060	27070	27080	27090	270100			
280	285						28060	28070	28080	28090	280100			
290	295						29060	29070	29080	29090	290100			
300	305						30060	30070	30080	30090	300100			

Metric Standard Flange Bearings Size



Unit:mm

D <sub>1</sub> φ d	D <sub>0</sub> φ D	D <sub>r</sub>	Length ${}_{0.40}^{0}$																	
			15	20	25	30	35	40	50	60	70	80	90							
25	28	35	25150	25200	25250															
30	34	42		30200	30250	30300														
35	39	47		35200	35250	35300	35350													
40	44	53			40250	40300	40350	40400												
45	50	60				45300	45350	45400	45500											
50	55	65				50300	50350	50400	50500											
55	60	70				55300	55350	55400	55500											
60	65	75				60300	60350	60400	60500	60600										
65	70	80				65300	65350	65400	65500	65600										
70	75	85					70350	70400	70500	70600	70700									
75	80	90					75350	75400	75500	75600	75700									
80	85	95					80350	80400	80500	80600	80700	80800								
90	95	105							90500	90600	90700	90800	90900							
100	105	115							100500	100600	100700	100800	100900							
110	115	125							110500	110600	110700	110800	110900							
120	125	135							120500	120600	120700	120800	120900							
130	135	145								130600	130700	130800	130900							
140	145	155								140600	140600	140800	140900							
150	155	165								150600	150700	150800	150900							
160	165	175								160600	160700	160800	160900							
170	175	185								170600	170700	170800	170900							
180	185	195								180600	180700	180800	180900							
190	195	205								190600	190700	190800	190900							
200	205	215								200600	200700	200800	200900							
225	230	240								225600	225700	225800	225900							
250	255	265								250600	250700	250800	250900							
265	270	280								265600	265700	265800	265900							
285	290	300								285600	285700	285800	285900							
300	305	315								300600	300700	300800	300900							

