

SF-1D hydraulic bushing is developed on the basis of SF-1P and meanwhile considering the motion way of oil pump and damper. It is the substitute of and parallels in performance with abroad DP4. In addition to covering the same usage of SF-1P, SF-1D in particular fits frequently reciprocating motion with a high side force. it is tendency to gradually replace SF-1P with SF-1D, the latter will cover a wide application in automobile, motor damper and oil pumps, etc.

Color Metallograph



- 1 ---PTFE with Oil Fibre, 0.01~0.03mm
- 2 ---Porous bronze, 0.2~0.3mm
(CuSn8Zn3:Sn<=8%;Zn<=3%;Cu=Bala
- 3 --Steel backing,0.7~2.3mm
- 4 ---Copper(0.008mm) or Tin(0.005mm) Plating



Steel Backing Technical Data

Code	Equal Code				Chemical Composition%					Physical Properties		
	ASTM	DIN	BS	JIS	C	Mn	P	S	Al	Yield Strength <=N/mm ²	Tensile Strength N/mm ²	Elongation %
ST12	1010 1008	CK10(1.1121) C10(1.0301)	040A10 050A10 060A10	S10C S09CK	0.10	0.5	0.035	0.035	--	280	270~410	28

Physical Properties

Load Capacity	Temperature Limit	PV Limit (dry)	PV Limit (oil)	Friction Coef	Speed Limit
140N/mm ²	-195℃~280℃	3.8N/mm ²	50N/mm ²	0.04~0.20	3m/s

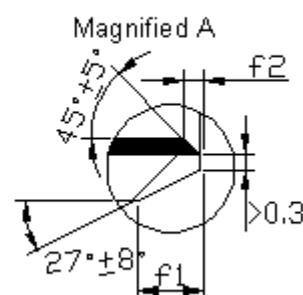
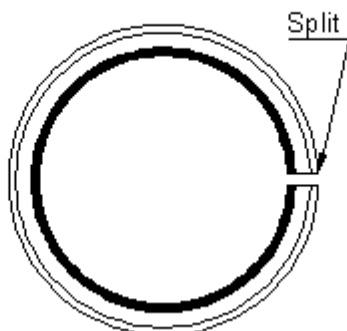
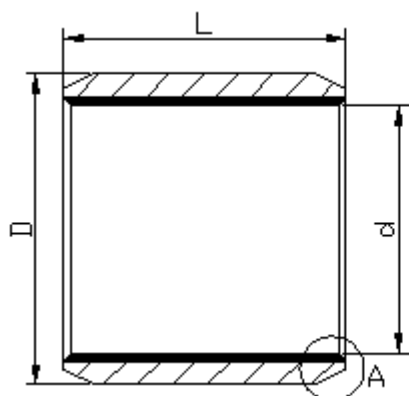
Application

1. PTFE and lead can protect the shaft while the machine in operation.
2. Bronze have good thermal conductivity, it'll divert heat while the machine operating.
3. It can be applied in the machine, working long time, which examine and repair is incapable, because the bronze can lubricate itself.
4. It is used in the feeble acid and alkali condition because of good anti-corrosion of bronze backing.
5. Good load capacity
6. It is widely used in steel metallurgy industry, such as bushed for filler grooves of successive casting machines, cement grouting pumps and screw conveyers of machine etc.
7. It can be composed in steel housing , or fabricated into flange bushes which result in function for motion both on flange and I.D.



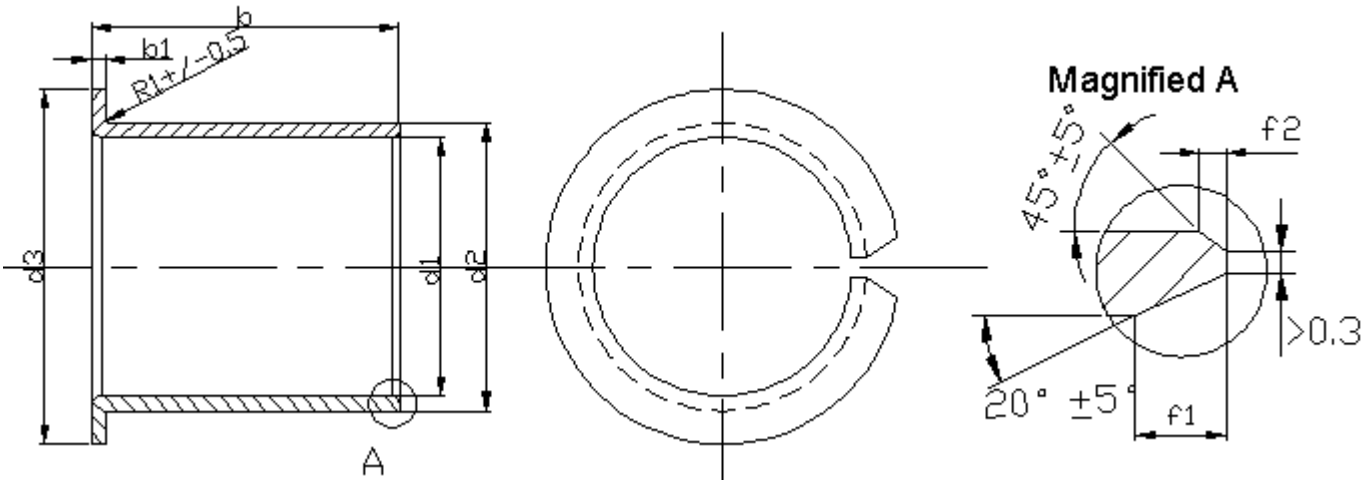
Size Specification

Cylinder Series Specification



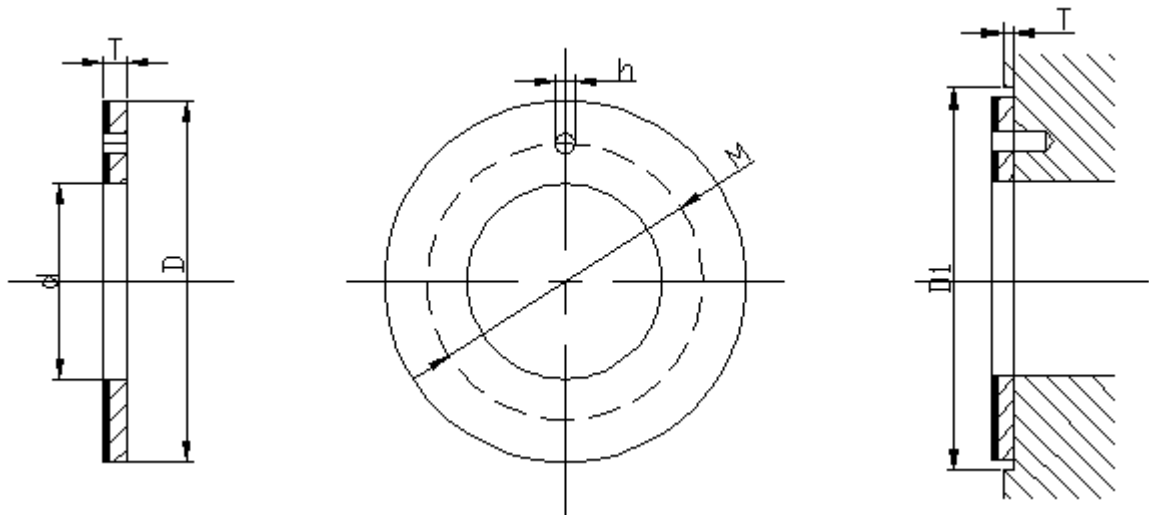
d	D	L	Housing Bore H7	Wall Thickness		f1	f2	L										
				Min	Max			6	8	10	12	15	20	25	30	40	50	
6	8	6	8	0.980	1.005	0.5	0.3	0606	0608	0610								
8	10	8	10					0806	0808	0810	0812	0815						
10	12	10	12					1006	1008	1010	1012	1015	1020					
12	14	12	14					1206	1208	1210	1212	1215	1220	1225				
13	15	13	15							1310			1320					
14	16	14	16							1410	1412	1415	1420	1425				
15	17	15	17							1510	1512	1515	1520	1525				
16	18	16	18							1610	1612	1615	1620	1625				
17	19	17	19							1710	1712		1720					
18	20	18	20							1810	1812	1815	1820	1825				
20	23	20	23	1.475	1.505	0.8	0.4			2010	2012	2015	2020	2025	2030			
22	25	22	25							2210	2212	2215	2220	2225	2230			
24	27	24	27									2415	2420	2425	2430			
25	28	25	28							2510	2512	2515	2520	2525	2530	2540	2550	
28	32	28	32	1.970	2.005	1.0	0.5					2815	2820	2825	2830	2840		
30	34	30	34								3012	3015	3020	3025	3030	3040		
32	36	32	36										3220		3230	3240		
35	39	35	39								3512	3515	3520	3525	3530	3540	3550	
38	42	38	42									3815			3830	3840		
40	44	40	44								4012		4020	4025	4030	4040	4050	
d	D	L	Housing Bore H7	Wall Thickness		f1	f2	L										
				Min	Max			20	25	30	40	50	60	70	80	100		
45	50	45	50	2.460	2.505	1.2	0.6	4520	4525	4530	4540	4550						
50	55	50	55					5020		5030	5040	5050	5060					
55	60	55	60							5530	5540	5550	5560					
60	65	60	65							6030	6040	6050	6060	6070				
65	70	65	70							6530	6540	6550	6560	6570				
70	75	70	75								7040	7050	7060	7070	7080			
75	80	75	80							7530	7540	7550	7560	7570	7580			
80	85	80	85	2.440	2.490	1.4	0.7				8040	8050	8060	8070	8080	80100		
85	90	85	90								8540		8560		8580	85100		
90	95	90	95								9040	9050	9060		9080	90100		
95	100	95	100									9550	9560		9580	95100		
100	105	100	105									10050	10060		10080			
105	110	105	110										10560		10580			
110	115	110	115										11060		11080			
120	125	120	125	2.415	2.465	1.6	0.8						12060		12080	120100		
125	130	125	130										12560			125100		
130	135	130	135										13060		13080	130100		
140	145	140	145										14060		14080	140100		
150	155	150	155									15050	15060		15080	150100		
160	165	160	165										16060		16080	160100		
180	185	180	185												18080	180100		
190	195	190	195												19080	190100		
200	205	200	205										20060		20080	200100		
220	225	220	225												22080	220100		
250	255	250	255												25080	250100		
260	265	260	265												26080	260100		
280	285	280	285												28080	280100		
300	305	300	305												30080	300100		

Flange Series Specification



Shaft Dia.	Housing (H7)	Size						
		d1	d2	d3+0.5	b+0.25	b1-0.2	f1	f2
-0.013 6 ^{-0.028}	8	6	8	12	4	1	0.5	0.4
					7			
-0.013 8 ^{-0.028}	10	8	10	15	5.5			
					7.5			
-0.016 10 ^{-0.034}	12	10	12	18	7			
					9			
					12			
-0.016 12 ^{-0.034}	14	12	14	20	7			
					9			
					12			
-0.016 14 ^{-0.034}	16	14	16	22	12			
					17			
-0.016 15 ^{-0.034}	17	15	17	23	9			
					12			
					17			
-0.016 16 ^{-0.034}	18	16	18	24	12			
					17			
-0.016 18 ^{-0.034}	20	18	20	26	12			
					17			
					20			
-0.020 20 ^{-0.041}	23	20	23	30	11.5	1.5	0.8	0.4
					16.5			
					21.5			
-0.020 22 ^{-0.041}	25	22	25	32	15			
					20			
-0.020 25 ^{-0.041}	28	25	28	35	11.5			
					16.5			
					21.5			
-0.025 30 ^{-0.050}	34	30	34	42	16	2	1.0	0.5
					26			
-0.025 35 ^{-0.050}	39	35	39	47	16			
					26			
-0.025 40 ^{-0.050}	44	40	44	53	26			
					40			

Washer Series Specification



Shaft Dia.	Size of Washer				Size For Installation		
	$d_{+0.25}$	$D_{-0.25}$	$T_{-0.05}$	$M_{\pm 0.12}$	$H_{+0.4/-0.1}$	$T_{\pm 0.2}$	$D_{+0.12}$
8	10	20	1.5	15	1.5	1	20
10	12	24	1.5	18	1.5	1	24
12	14	26	1.5	20	2	1	26
14	16	30	1.5	23	2	1	30
16	18	32	1.5	25	2	1	32
18	20	36	1.5	28	3	1	36
20	22	38	1.5	30	3	1	38
22	24	42	1.5	33	3	1	42
24	26	44	1.5	35	3	1	44
25	28	48	1.5	38	4	1	48
30	32	54	1.5	43	4	1	54
35	38	62	1.5	60	4	1	62
40	42	66	1.5	54	4	1	66
45	48	74	1.5	61	4	1.5	74
50	52	78	2	65	4	1.5	78
60	62	90	2	76	4	1.5	90