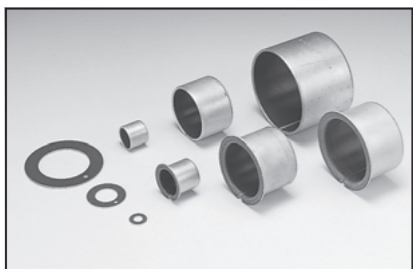
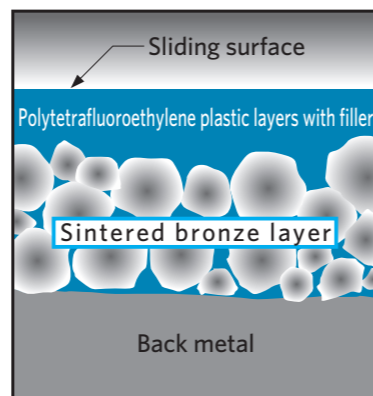


Oiles Drymet LF Polytetrafluoroethylene plastic multi-layer bearings with back metals



Feature

- Serviceable without the need for lubrication. Thin and lightweight for compact design.
- Demonstrate low coefficient of friction and superior load performances in high-load, low-speed conditions.
- Usable at the high PV values even in the middle- and high-speed zones when lubricated.
- Usable in wide temperature ranges from low to high temperatures. Has superior chemical resistance.
- Features superior dimensional stability, mechanical strength, and thermal conductivity.
- The standard products and plate materials are available in various sizes.



image

Service range

Lubrication condition	Dry
Service temperature range °C	-200~+280
Allowable max. pressure P N/mm ² {kgf/cm ² }	49.0 (137) {500 (1,400)}
Allowable max. velocity V m/s {m/min}	0.65 {39}
Allowable max. PV value N/mm ² · m/s {kgf/cm ² · m/min}	3.60 {2,200}

The values in parentheses are static bearing pressures, which are the bearing pressures in applications with no motion or very small motion (≤ 0.0017 m/s {0.1 m/min}).

※ Allowable max. pressure of LFCF is 24.5 N/mm² {250 Kgf/cm²}.

Mechanical properties

Tensile strength	JIS Z 2241	N/mm ² {kgf/cm ² }	380 {3,875}
Elongation	JIS Z 2241	%	27
Hardness	JIS Z 2244	HV	107

※ The values shown above are typical values, not the standard values.

※ The values shown above are values of back metal.

Test data

Journal rotation test

<Testing conditions>

Bearing dimension : $\phi 40 \times \phi 44 \times l 30$

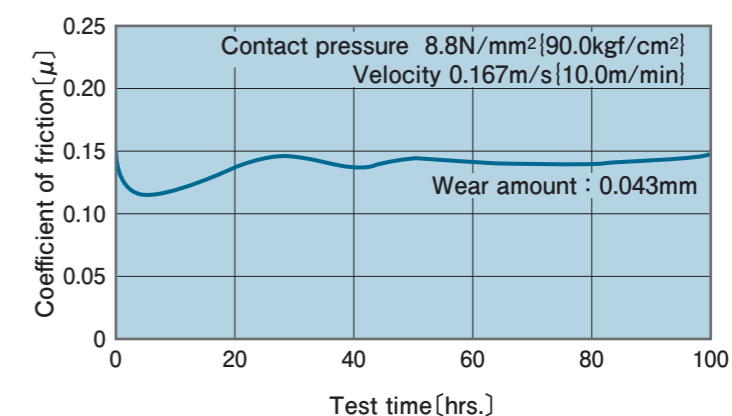
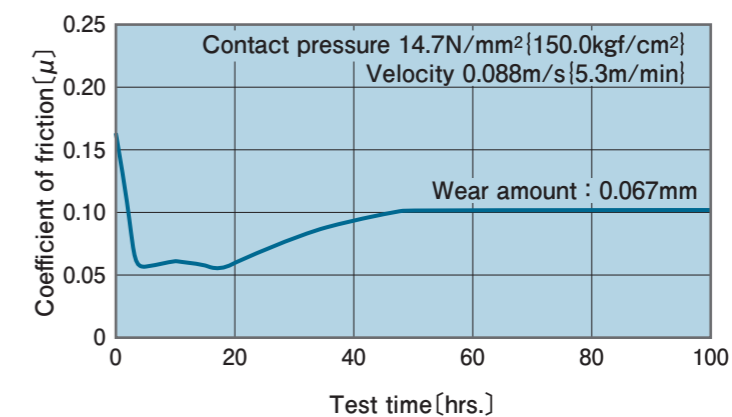
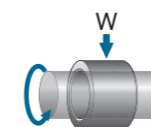
Mating material : S45C

Pressure : 14.7, 8.8, N/mm²
{150.0, 90.0 kgf/cm²}

Velocity : 0.088, 0.167 m/s
{5.3, 10.0 m/min}

Test time : 100 hrs.

Lubrication : dry



Press-fitting (Rolled bushing)

Press-fitting jig

Generally, as shown in the figure 1, a mandrel is used for the press-fitting. However use of a guide ring facilitates easier press-fitting. Use of a guide ring prevents damage of a bushing at the time of press-fitting. The dimension of a guide ring should be calculated from the table below.

Inner diameter of the guide ring should be the size so that the bushing can be inserted by hands. Length of the guide ring should be more than one-third of the bushing, or if possible, it should be the same length as the bushing.

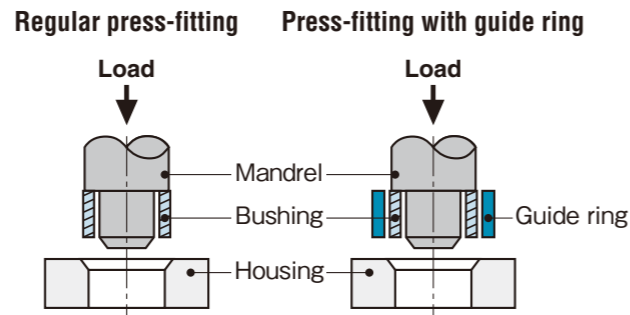


Figure 1

The dimension of mandrel should be calculated from table below.

Dimension of bushing	Dimension of mandrel
I.D. D ₀	*1 d ₀ = D ₀ - (0.05 to 0.10)
O.D. D ₁	*2 d ₁ = D ₁ - (0.20 to 0.30)
Length L	ℓ ≥ L

*1 Techmet B Standard Type (TCB) should be D₀ - (0.25 to 0.30).

*2 Use of flange bushings should be the same size of flange.

The dimension of guide ring should be calculated from table below.

Dimension of bushing	Guide ring I.D.	Guide ring O.D.
Up to φ40	D ₁ + (0.1 to 0.3)	
φ42 to φ60	D ₁ + (0.2 to 0.5)	D ₁ + (10 to 15)
Over φ65	D ₁ + (0.5 to 1.0)	

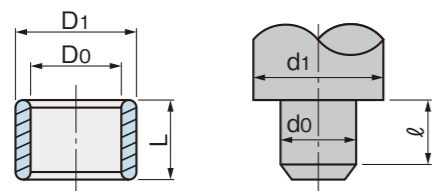


Figure 2

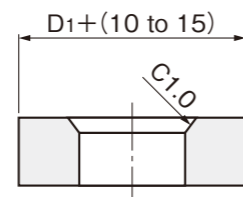


Figure 3

Inner diameter of the guide ring should be the size that bushing can be inserted by hands. The length of the guide ring should be more than one-third of the bushing, or if possible, it should be the same length as the bushing.

Housing chamfer

For the housing chamfer, either a round chamfer or a tapered chamfer is recommended. In case of a C-surface chamfer, (more than C1.0) make sure there is no burr. Smoother press-fitting is possible by applying small amount of grease or lubricant.

Press-fit force

Press-fit smoothly with hydraulic (pressure), pneumatic pressure, or a vice.

Avoid press-fit by use of impact such as use of a hammer.

It might induce damage of the bushing, or change the size of the inner diameter after press-fit.

Press-fit force is obtained by below formula.

$$F = (0.9 \text{ to } 1.2) \times 10^4 \cdot \frac{t \cdot L \cdot S}{D_1} \text{ [kg]}$$

t : thickness of the steel backing
L : length of the bushing
S : average interference
D₁ : O.D. of bushing

● Thickness of the steel backing

Drymet LF	Unit : mm
I.D. of bushing	t
Up to φ18	0.65
φ19 to φ25	1.15
φ26 to φ40	1.65
φ42 and over	2.15
LFCF	0.25

Techmet B	Unit : mm
I.D. of bushing	t
Up to φ18	0.50
φ20 to φ22	0.95

Toughmet / Toughmet D	Unit : mm
I.D. of bushing	t
Up to φ18	0.70
φ19 to φ25	1.10
φ26 to φ40	1.60
φ42 and over	2.10

*LFCF is obtained by below formula.

$$F = (0.4 \text{ to } 0.8) \times 10^4 \cdot \frac{t \cdot L \cdot S}{D_1} \text{ [kg]}$$

Techmet E	Unit : mm
thickness of bearing	t
0.5	0.25
1.0	0.65

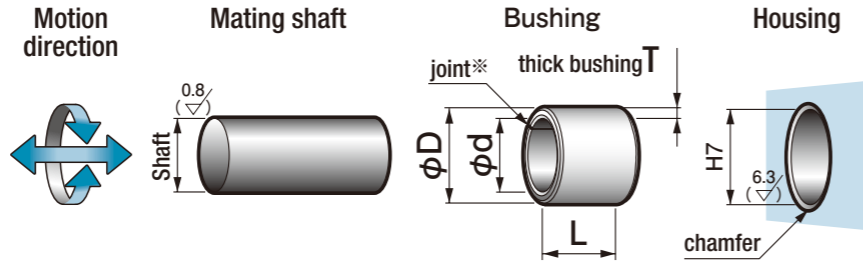
*Techmet E (t0.5) is obtained by below formula.

$$F = (0.4 \text{ to } 0.8) \times 10^4 \cdot \frac{t \cdot L \cdot S}{D_1} \text{ [kg]}$$

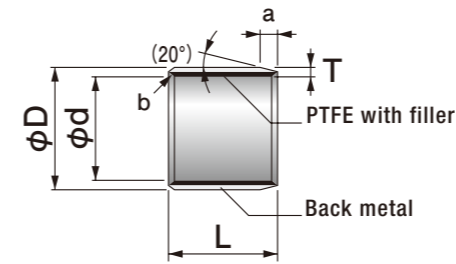


Specify Part No. by required I.D. and length.
(e.g.) I.D. is 15mm and length is 8mm.

LFB - 1508
Part No.



※The joint causes no influences upon rotation of the shaft. Be careful when press-fitting so that the joint is not at the position to which the maximum load is applied.



a: O.D. chamfering for the bushing I.D. of $\phi 10$ or more

T	1.0	1.5	2.0
a	0.5	0.8	1.0

(mm)

b: I.D. chamfering for the bushing I.D. of $\phi 10$ or more

T	1.0	1.5	2.0
b	C0.3	C0.5	C0.5

(mm)

※Chamfering of inner or outer diameters less than $\phi 10$ mm is done only to remove burrs.

Shaft		Housing		I.D.		O.D.		Wall thickness		Length L Tolerance -0.3					
Size	Tolerance	Size	H7 Tolerance	ϕd	ϕD	Tolerance	T	Tolerance	3	4	5	6	7	8	
3	-0.025 -0.034	5	+0.012 0	3	5	+0.047 +0.017	1.0	0 -0.025	0303	0304	0305	0306			
4	-0.025 -0.037	6	+0.012 0	4	6	+0.047 +0.017	1.0	0 -0.025	0403	0404	0405	0406		0408	
5	-0.025 -0.037	7	+0.015 0	5	7	+0.055 +0.025	1.0	0 -0.025	0503	0504	0505	0506		0508	
6	-0.025 -0.037	8	+0.015 0	6	8	+0.055 +0.025	1.0	0 -0.025	0603	0604	0605	0606	0607	0608	
7	-0.025 -0.040	9	+0.015 0	7	9	+0.055 +0.025	1.0	0 -0.025			0705	0706	0707	0708	
8	-0.025 -0.040	10	+0.015 0	8	10	+0.055 +0.025	1.0	0 -0.025			0805	0806	0807	0808	
9	-0.025 -0.040	11	+0.018 0	9	11	+0.060 +0.030	1.0	0 -0.025				0906			
10	-0.025 -0.040	12	+0.018 0	10	12	+0.060 +0.030	1.0	0 -0.025				1006	1007	1008	
12	-0.025 -0.043	14	+0.018 0	12	14	+0.060 +0.030	1.0	0 -0.025				1206		1208	
13	-0.025 -0.043	15	+0.018 0	13	15	+0.060 +0.030	1.0	0 -0.025						1308	
14	-0.025 -0.043	16	+0.018 0	14	16	+0.065 +0.035	1.0	0 -0.025						1408	
15	-0.025 -0.043	17	+0.018 0	15	17	+0.065 +0.035	1.0	0 -0.025						1508	
16	-0.025 -0.043	18	+0.018 0	16	18	+0.070 +0.035	1.0	0 -0.025							
17	-0.025 -0.043	19	+0.021 0	17	19	+0.070 +0.035	1.0	0 -0.025							
18	-0.025 -0.043	20	+0.021 0	18	20	+0.075 +0.040	1.0	0 -0.025							
19	-0.025 -0.046	22	+0.021 0	19	22	+0.075 +0.040	1.5	0 -0.030							
20	-0.025 -0.046	23	+0.021 0	20	23	+0.080 +0.045	1.5	0 -0.030							
22	-0.025 -0.046	25	+0.021 0	22	25	+0.080 +0.045	1.5	0 -0.030							
24	-0.025 -0.046	27	+0.021 0	24	27	+0.080 +0.045	1.5	0 -0.030							
25	-0.025 -0.046	28	+0.021 0	25	28	+0.085 +0.050	1.5	0 -0.030							
26	-0.025 -0.046	30	+0.021 0	26	30	+0.085 +0.050	2.0	0 -0.030							
28	-0.025 -0.046	32	+0.025 0	28	32	+0.090 +0.050	2.0	0 -0.030							

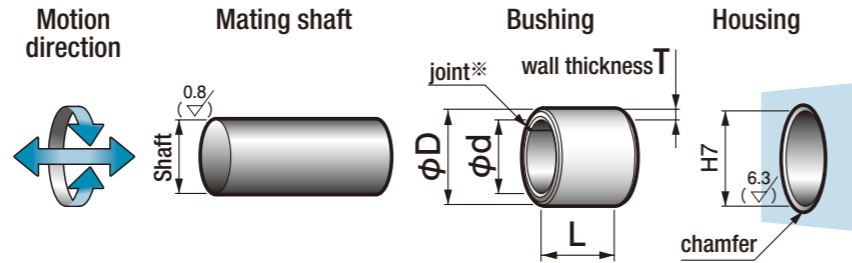
※Outer diameter is measured by exclusive gauge.
※The I.D. tolerance after press fitting is for reference only.
※I.D. $\phi 30\sim\phi 160$ are shown on pages 157 to 158.

Length L Tolerance -0.3									I.D. tolerance after press fitting (reference)	I.D. ϕd
10	12	14	15	16	20	25	30	35		
									+0.062 0	3
									+0.062 0	4
									+0.065 0	5
0610	0612								+0.065 0	6
0710	0712								+0.065 0	7
0810	0812		0815						+0.065 0	8
0910									+0.068 0	9
1010	1012		1015		1020				+0.068 0	10
1210	1212		1215		1220				+0.068 0	12
1310	1312		1315		1320				+0.068 0	13
1410	1412	1414	1415	1416	1420				+0.068 0	14
1510	1512		1515		1520	1525			+0.068 0	15
1610	1612		1615		1620	1625			+0.068 0	16
1710			1715						+0.071 0	17
1810	1812		1815		1820	1825	1830		+0.071 0	18
1910			1915		1920				+0.081 0	19
2010	2012		2015		2020	2025	2030		+0.081 0	20
2210	2212		2215		2220	2225	2230		+0.081 0	22
			2415		2420	2425	2430		+0.081 0	24
2510	2512		2515		2520	2525	2530	2535	+0.081 0	25
			2615		2620	2625	2630		+0.081 0	26
	2812		2815		2820	2825	2830		+0.085 0	28

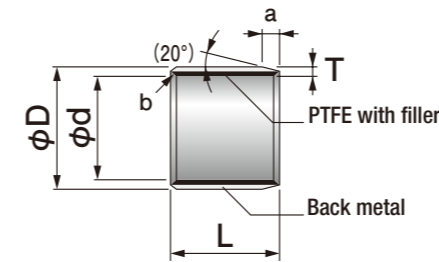


Specify Part No. by required I.D. and length.
(e.g.) I.D. is 70mm and length is 35mm.

LFB - 7035
Part No.



※The joint causes no influences upon rotation of the shaft. Be careful when press-fitting so that the joint is not at the position to which the maximum load is applied.



a: O.D. chamfering

T	2.0	2.5
a	1.0	1.0

(mm)

b: I.D. chamfering

T	2.0	2.5
b	C0.5	C0.5

(mm)

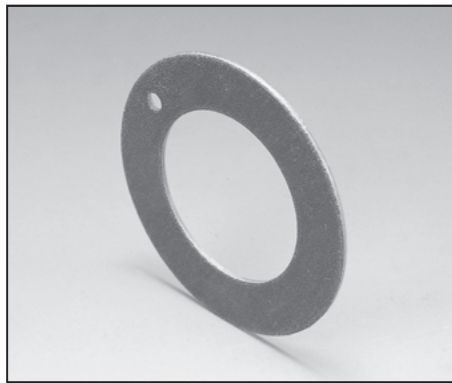
Shaft Size	Shaft Tolerance	Housing H7		I.D.		O.D.		Wall thickness T		Length L Tolerance -0.3					
		H7	Tolerance	ϕd	ϕD	T	Tolerance	12	15	20	25	30	35		
30	-0.025 -0.046	34	$+0.025$ 0	30	34	$+0.090$ $+0.050$	2.0	0 -0.030	3012	3015	3020	3025	3030	3035	
31	-0.025 -0.050	35	$+0.025$ 0	31	35	$+0.090$ $+0.050$	2.0	0 -0.030		3115		3125	3130		
32	-0.025 -0.050	36	$+0.025$ 0	32	36	$+0.090$ $+0.050$	2.0	0 -0.030		3215	3220	3225	3230		
35	-0.025 -0.050	39	$+0.025$ 0	35	39	$+0.095$ $+0.055$	2.0	0 -0.030	3512	3515	3520	3525	3530	3535	
38	-0.025 -0.050	42	$+0.025$ 0	38	42	$+0.095$ $+0.055$	2.0	0 -0.030			3820	3825	3830	3835	
40	-0.025 -0.050	44	$+0.025$ 0	40	44	$+0.095$ $+0.055$	2.0	0 -0.030	4012	4015	4020	4025	4030	4035	
45	-0.025 -0.050	50	$+0.025$ 0	45	50	$+0.100$ $+0.060$	2.5	0 -0.040			4520	4525	4530	4535	
50	-0.025 -0.050	55	$+0.030$ 0	50	55	$+0.105$ $+0.060$	2.5	0 -0.040			5020	5025	5030	5035	
55	-0.025 -0.055	60	$+0.030$ 0	55	60	$+0.110$ $+0.065$	2.5	0 -0.040				5525	5530	5535	
60	-0.025 -0.055	65	$+0.030$ 0	60	65	$+0.120$ $+0.070$	2.5	0 -0.040					6030	6035	
65	$+0.035$ $+0.005$	70	$+0.030$ 0	65	70	$+0.125$ $+0.075$	2.5	-0.030 -0.080					6530		
70	$+0.035$ $+0.005$	75	$+0.030$ 0	70	75	$+0.125$ $+0.075$	2.5	-0.030 -0.080					7030	7035	
75	$+0.035$ $+0.005$	80	$+0.030$ 0	75	80	$+0.130$ $+0.075$	2.5	-0.030 -0.080					7530	7535	
80	$+0.035$ $+0.005$	85	$+0.035$ 0	80	85	$+0.130$ $+0.075$	2.5	-0.030 -0.080							
85	$+0.035$ 0	90	$+0.035$ 0	85	90	$+0.130$ $+0.075$	2.5	-0.030 -0.080							
90	$+0.035$ 0	95	$+0.035$ 0	90	95	$+0.130$ $+0.075$	2.5	-0.030 -0.080							
100	$+0.035$ 0	105	$+0.035$ 0	100	105	$+0.140$ $+0.080$	2.5	-0.030 -0.080							
110	$+0.035$ 0	115	$+0.035$ 0	110	115	$+0.140$ $+0.080$	2.5	-0.030 -0.080							
120	$+0.035$ 0	125	$+0.040$ 0	120	125	$+0.145$ $+0.090$	2.5	-0.030 -0.080							
130	$+0.035$ -0.005	135	$+0.040$ 0	130	135	$+0.145$ $+0.090$	2.5	-0.030 -0.080							
140	$+0.035$ -0.005	145	$+0.040$ 0	140	145	$+0.165$ $+0.100$	2.5	-0.030 -0.080							
150	$+0.035$ -0.005	155	$+0.040$ 0	150	155	$+0.185$ $+0.120$	2.5	-0.030 -0.080							
160	$+0.035$ -0.005	165	$+0.040$ 0	160	165	$+0.185$ $+0.120$	2.5	-0.030 -0.080							

※Outer diameter is measured by exclusive gauge.
※The I.D. tolerance after press fitting is for reference only.
※I.D. $\phi 3 \sim \phi 28$ are shown on pages 155 to 156.

Length L Tolerance -0.3								I.D. tolerance after press fitting (reference)	I.D. ϕd
40	50	60	70	80	90	95	100		
3040	3050							$+0.085$ 0	30
3140								$+0.085$ 0	31
3240								$+0.085$ 0	32
3540	3550							$+0.085$ 0	35
3840								$+0.085$ 0	38
4040	4050							$+0.085$ 0	40
4540	4550							$+0.105$ 0	45
5040	5050	5060						$+0.110$ 0	50
5540	5550	5560						$+0.110$ 0	55
6040	6050	6060						$+0.110$ 0	60
6540	6550	6560			6080			$+0.190$ $+0.060$	65
7040	7050	7060	7070	7080				$+0.190$ $+0.060$	70
7540	7550	7560		7580				$+0.190$ $+0.060$	75
8040	8050	8060		8080				$+0.195$ $+0.060$	80
8540	8550	8560		8580				$+0.195$ $+0.060$	85
9040	9050	9060			9090			$+0.195$ $+0.060$	90
	10050		10070	10080		10095	100100	$+0.195$ $+0.060$	100
	11050		11070			11095	110100	$+0.195$ $+0.060$	110
	12050		12070			12095	120100	$+0.200$ $+0.060$	120
	13050			13080			130100	$+0.200$ $+0.060$	130
	14050			14080			140100	$+0.200$ $+0.060$	140
	15050			15080			150100	$+0.200$ $+0.060$	150
	16050			16080			160100	$+0.200$ $+0.060$	160

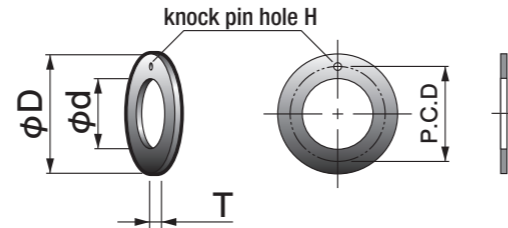
LFW

Oiles Drymet LF Washers



Specify Part No. by required I.D. and thickness.
(e.g.) I.D. is 20mm and thickness is 1.5mm.

LFW - 2015
Part No.

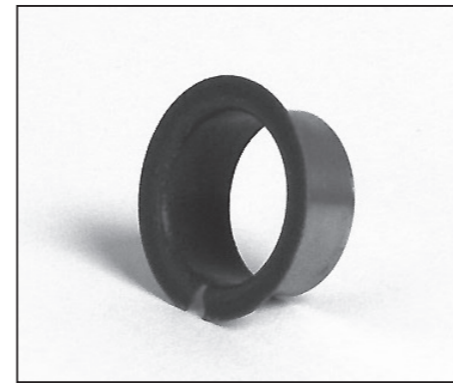


● Sliding surface consists of a plastic layer.

Part No.	I.D.		O.D.		Thickness		Knock pin hole		Position of knock pin	
	φd	Tolerance	φD	Tolerance	T	Tolerance	H	Tolerance	P.C.D.	Tolerance
LFW-0815	8	+0.25 0	16	0 -0.25	1.5	-0.03 -0.08	1	+0.30 +0.10	12	±0.12
LFW-1015	10	+0.25 0	18	0 -0.25	1.5	-0.03 -0.08	1	+0.30 +0.10	14	±0.12
LFW-1215	12	+0.25 0	24	0 -0.25	1.5	-0.03 -0.08	1.5	+0.375 +0.125	18	±0.12
LFW-1415	14	+0.25 0	26	0 -0.25	1.5	-0.03 -0.08	2	+0.375 +0.125	20	±0.12
LFW-1615	16	+0.25 0	30	0 -0.25	1.5	-0.03 -0.08	2	+0.375 +0.125	23	±0.12
LFW-1815	18	+0.25 0	32	0 -0.25	1.5	-0.03 -0.08	2	+0.375 +0.125	25	±0.12
LFW-2015	20	+0.25 0	36	0 -0.25	1.5	-0.03 -0.08	3	+0.375 +0.125	28	±0.12
LFW-2215	22	+0.25 0	38	0 -0.25	1.5	-0.03 -0.08	3	+0.375 +0.125	30	±0.12
LFW-2415	24	+0.25 0	42	0 -0.25	1.5	-0.03 -0.08	3	+0.375 +0.125	33	±0.12
LFW-2615	26	+0.25 0	44	0 -0.25	1.5	-0.03 -0.08	3	+0.375 +0.125	35	±0.12
LFW-2815	28	+0.25 0	48	0 -0.25	1.5	-0.03 -0.08	4	+0.375 +0.125	38	±0.12
LFW-3215	32	+0.25 0	54	0 -0.25	1.5	-0.03 -0.08	4	+0.375 +0.125	43	±0.12
LFW-3815	38	+0.25 0	62	0 -0.25	1.5	-0.03 -0.08	4	+0.375 +0.125	50	±0.12
LFW-4215	42	+0.25 0	66	0 -0.25	1.5	-0.03 -0.08	4	+0.375 +0.125	54	±0.12
LFW-4820	48	+0.25 0	74	0 -0.25	2.0	-0.03 -0.08	4	+0.375 +0.125	61	±0.12
LFW-5220	52	+0.25 0	78	0 -0.25	2.0	-0.03 -0.08	4	+0.375 +0.125	65	±0.12

LFCF

Oiles Drymet LF (t0.5)

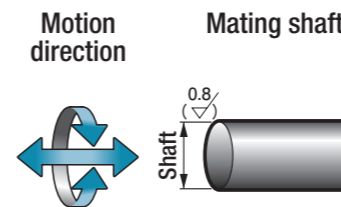


Specify Part No. by required I.D. and length.
(e.g.) I.D. is 8mm and length is 5.5mm.

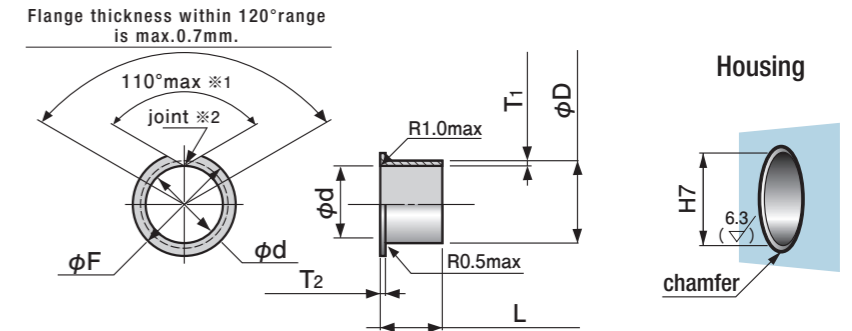
LFCF - 0805
Part No.

Feature

- This bearing is as thin as 0.5 mm, allowing the user who gives up an idea to use a bearing in a small space to use it.
- The sliding layer made of plastic containing special additives maintains stable coefficient of friction. It is effective to reduce abnormal noise and wear in applications without bushings.



Tolerance of mating shaft
General use, high load e7

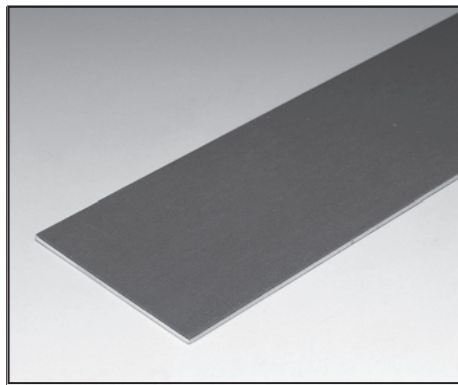


- ※1 The degree shown is after press-fitted into the ring gauge of φD +0.055mm. (the ring gauge of φD +0.060mm is used for the bushings of φ11 or bigger.)
- ※2 The joint causes no influences upon rotation of the shaft. Be careful when press-fitting so that the joint is not at the position to which the maximum load is applied.
- ※3 There is no chamfer on LFCF.

Part No.	I.D.		O.D.		Flange			Thick bushing		Length L Tolerance ±0.3	I.D. tolerance after press fitting (reference)	
	φd	Tolerance	φD	Tolerance	φF	Tolerance	T ₂	Tolerance	T ₁			Tolerance
LFCF-0505	5		6	+0.055 +0.025	8.5	±0.5	0.48	±0.05	0.48	±0.02	5.5	+0.092 0
LFCF-0605	6		7	+0.055 +0.025	10	±0.5	0.48	±0.05	0.48	±0.02	5.5	+0.095 0
LFCF-0705	7		8	+0.055 +0.025	11	±0.5	0.48	±0.05	0.48	±0.02	5.5	+0.095 0
LFCF-0805	8		9	+0.055 +0.025	12	±0.5	0.48	±0.05	0.48	±0.02	5.5	+0.095 0
LFCF-1006	10		11	+0.060 +0.030	15	±0.5	0.48	±0.05	0.48	±0.02	6.5	+0.098 0
LFCF-1206	12		13	+0.060 +0.030	17	±0.5	0.48	±0.05	0.48	±0.02	6.5	+0.098 0
LFCF-1606	16		17	+0.060 +0.030	21	±0.5	0.48	±0.05	0.48	±0.02	6.5	+0.098 0

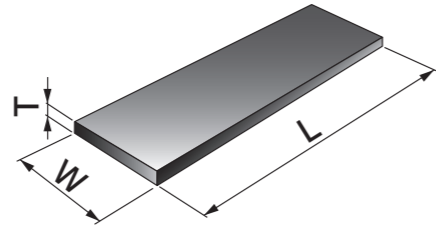
- ※Outer diameter is measured by exclusive gauge.
- ※I.D. after press-fitted into the housing of φD H7 is reference value.

LFP Oiles Drymet LF Plates



Specify Part No. by required thickness and width.
(e.g.) Thickness is 1.5mm and width is 90mm.

LFP - 1590
Part No.



● Sliding surface consists of a plastic layer.

Part No.	Thickness		Width	Length
	T	Tolerance	W	L
LFP-1080	1.0	-0.03 -0.13	80	500
LFP-1590	1.5	-0.03 -0.13	90	500
LFP-20100	2.0	-0.03 -0.13	100	500
LFP-25100	2.5	-0.03 -0.13	100	500

Oiles LF Guides Guide unit bearings



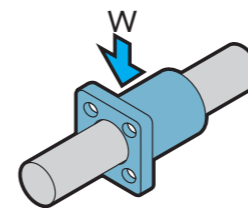
Standard product



Feature

- Incorporates Oiles bearings for self-lubricating operations.
- Features low coefficient of friction and superior wear resistance.
- Easily mountable. Compatible with ball bearing types.
- Low prices with simple structures.

Design condition



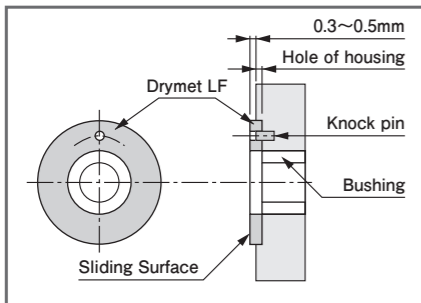
Part No.	Allowable load W N [kgf]		Allowable velocity m/s [m/min]	Service temperature range °C
	Dynamic	Static		
LFG12-30	235 { 24}	706 { 72}	0.67 {40}	-30~+130*
LFG16-37	376 { 38}	1,129 {115}		
LFG20-42	588 { 60}	1,764 {180}		
LFG25-59	980 {100}	2,940 {300}		
LFG30-64	1,323 {135}	3,969 {405}		

*Temperature range for dust seal.

*Unusable under the condition of water, splashing water and high humidity.

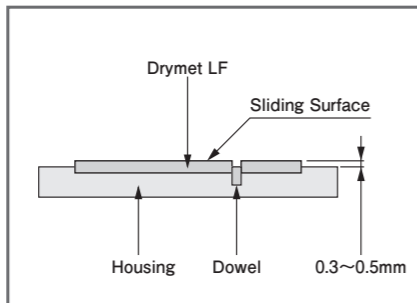
How to attach washers, plates

① Knock pin method (Thrust washer)



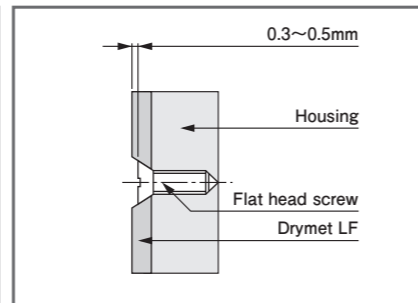
*Sliding surface consists of a plastic layer.

② Inlay method (Plate)



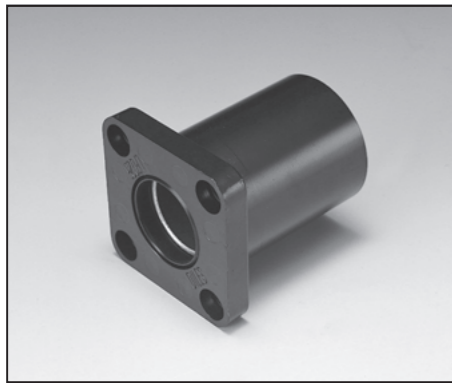
*Sliding surface consists of a plastic layer.

③ Flat head screw method



④ Using glue

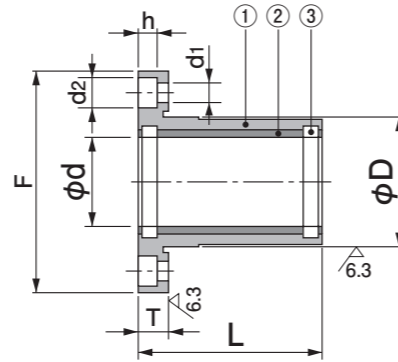
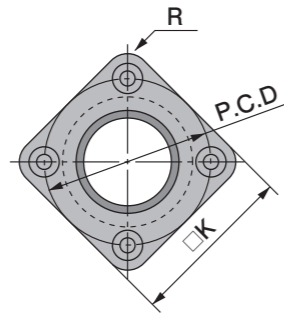
In the case of (2), the washer and plate may be inserted with glue, not a knock pin. Synthetic epoxy plastic glue is suitable, though no glue is specified, in particular. Be careful because fitting with glue only may result in separation in some cases.



Specify Part No. by required I.D. and length.
(e.g.) I.D. is 20mm and length is 42mm.

LFG 20 - 42
Part No.

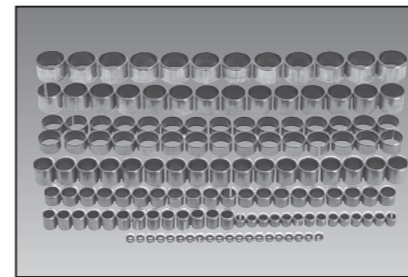
● Recommended mating shaft tolerance is g6 to e7.



	Part name	Material
①	Housing	Aluminum with rust-proof finish
②	Bearing	Drymet LF
③	Dust seal	NBR

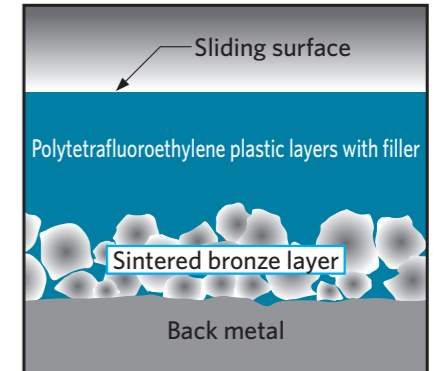
Part No.	I.D.		O.D.		Length		F	K	T	P.C.D	R	Mounting hole			Bolt
	φd	φD	Tolerance	L	Tolerance	d1						d2	h		
LFG12-30	12	21	$\begin{matrix} -0.017 \\ -0.032 \end{matrix}$	30	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	42.8	32	6	32	3	4.5	8	4.1	M4	
LFG16-37	16	28	$\begin{matrix} -0.017 \\ -0.032 \end{matrix}$	37	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	49.0	37	6	38	4	4.5	8	4.1	M4	
LFG20-42	20	32	$\begin{matrix} -0.024 \\ -0.038 \end{matrix}$	42	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	55.3	42	8	43	5	5.5	9.5	5.1	M5	
LFG25-59	25	40	$\begin{matrix} -0.024 \\ -0.038 \end{matrix}$	59	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	64.9	50	8	51	7	5.5	9.5	5.1	M5	
LFG30-64	30	45	$\begin{matrix} -0.029 \\ -0.042 \end{matrix}$	64	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	75.4	58	10	60	8	6.6	11	6.1	M6	

※ Unusable under the condition of water, splashing water and high humidity.



Feature

- Serviceable without the need for lubrication. Features superior dimensional stability, mechanical strength, and thermal conductivity with a thin, lightweight, and compact design.
- Demonstrates stable low coefficient of friction and superior wear resistance under high-speed conditions.
- The plastic layers have machining allowance, allowing high dimensional accuracy when the inner diameter is machined.
- The standard products in various sizes are available on order.



image

Service range

Lubrication condition	Dry
Service temperature range °C	-50~+250
Allowable max. pressure P N/mm ² {kgf/cm ² }	19.5 (137) {199 (1,400)}
Allowable max. velocity V m/s {m/min}	2.50 {150}
Allowable max. PV value N/mm ² · m/s {kgf/cm ² · m/min}	1.45 {887}

The values in parentheses are static bearing pressures, which are the bearing pressures in applications with no motion or very small motion (≤ 0.0017 m/s {0.1m/min}).

Mechanical properties

Tensile strength	JIS Z 2241	N/mm ² {kgf/cm ² }	380 {3,875}
Elongation	JIS Z 2241	%	27
Hardness	JIS Z 2244	HV	107

※ The values shown above are typical values, not the standard values.

※ The values shown above are values of back metal.

● Please refer to the fitting method of Drymet LF. (P.153, 154)

Lathe turning

Cutting tool	carbide tool (JIS)		
	Relief angle	5~10°	
Rake angle	10~20°		
Nose radius, (mm)	0.10~0.20		
Condition	Speed (m/min)	60~200	
	Cut depth (mm)	0.05~0.10	
	Feed (mm/rev)	0.05~0.20	

Attention should be paid to dimensional variances due to thermal expansion, chucking, and bend of the material.

The Oiles Techmet should be ground. If it is reamed, it is difficult to maintain the dimension in mass production.

The I.D. machining allowance is 0.2 mm for the diameter.

Machining accuracy (bushing)

I.D.	O.D.	Length
class 7 (Note)	—	class 8 to 9

(Note) Accuracy after press fitting.

Classes here are in JIS standard.

This product demonstrates satisfactory performance at the slide surface roughness of Rz6.3 to 12.5μm.

Dimensions may change due to thermal expansion, chucking pressure, moisture absorption deformation, etc. High accuracy is ensured if the product is installed on the housing and then ground.