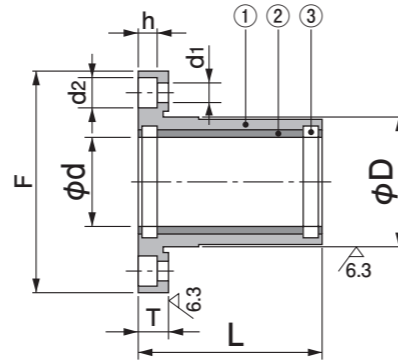
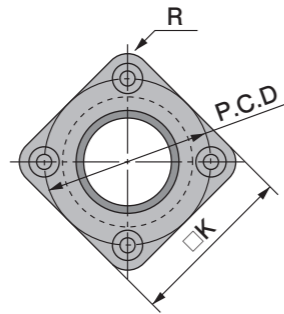


Specify Part No. by required I.D. and length.
(e.g.) I.D. is 20mm and length is 42mm.

LFG 20 - 42
Part No.

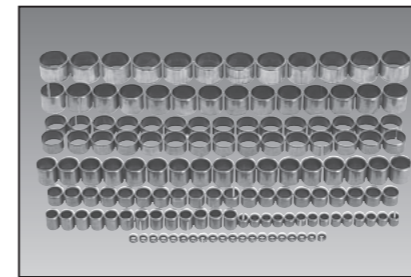
● Recommended mating shaft tolerance is g6 to e7.



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

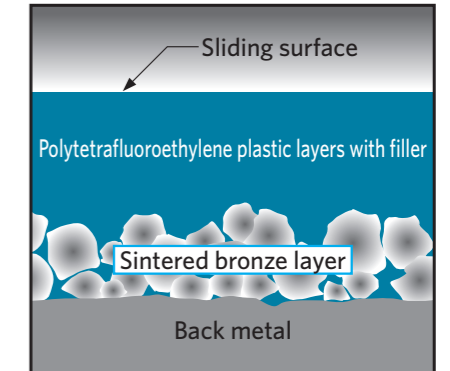
Part No.	I.D.		O.D.		Length		F	K	T	P.C.D	R	Mounting hole			Bolt
	φd	φD	Tolerance	L	Tolerance	d1						d2	h		
LFG12-30	12	21	$\begin{smallmatrix} -0.017 \\ -0.032 \end{smallmatrix}$	30	$\begin{smallmatrix} 0 \\ -0.3 \end{smallmatrix}$	42.8	32	6	32	3	4.5	8	4.1	M4	
LFG16-37	16	28	$\begin{smallmatrix} -0.017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

		carbide tool (JIS)	
Cutting tool	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.

Oiles Techmet B Polytetrafluoroethylene plastic multi-layer bearings with back metals

Test data

Journal rotation test

<Testing conditions>

Bearing dimension : $\phi 10 \times \phi 12 \times l 10$

Mating material : SUS304
(surface roughness $Rz1 \mu m$)

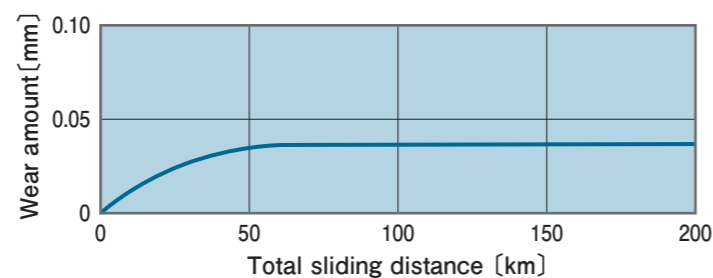
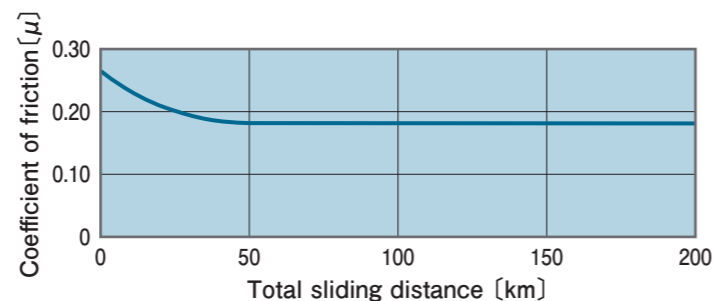
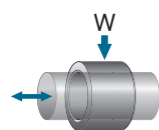
Pressure : $0.029 N/mm^2$ { $0.3 kgf/cm^2$ }

Velocity : $0.600 m/s$ { $36.0 m/min$ }

Reciprocating cycle : 60cpm

Stroke : 300mm

Lubrication : dry



High temp. thrust rotation test

<Testing conditions>

Mating material : A5056
(surface roughness $Rz1 \mu m$)

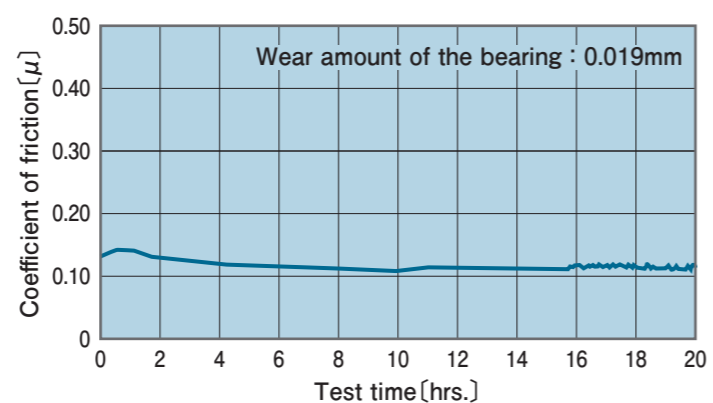
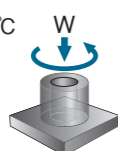
Pressure : $0.98 N/mm^2$ { $10.0 kgf/cm^2$ }

Velocity : $0.083 m/s$ { $5.0 m/min$ }

Atmospheric temperature : $300^\circ C$

Test time : 20hrs.

Lubrication : dry



Journal rotation test

<Testing conditions>

Bearing dimension : $\phi 10 \times \phi 12 \times l 10$

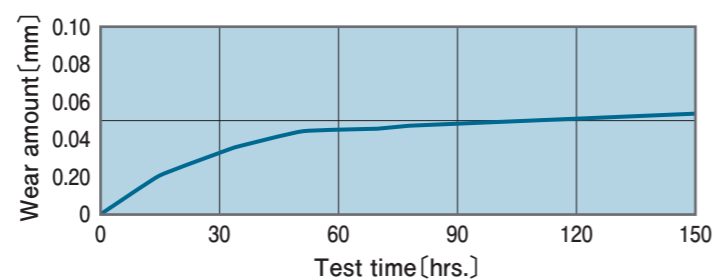
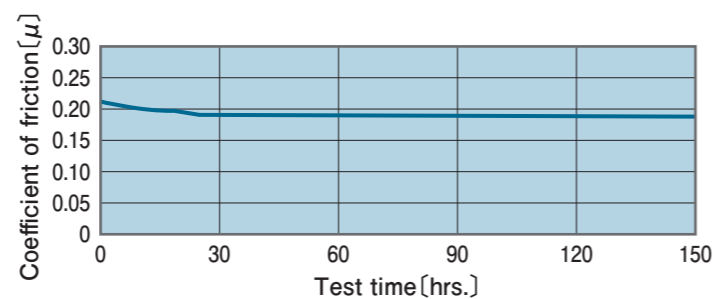
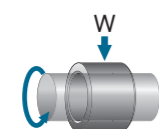
Mating material : SUS304
(surface roughness $Rz1 \mu m$)

Pressure : $0.49 N/mm^2$ { $5.0 kgf/cm^2$ }

Velocity : $1.667 m/s$ { $100.0 m/min$ }

Test time : 150hrs.

Lubrication : dry



TCB Oiles Techmet B Bushings Made-to-order

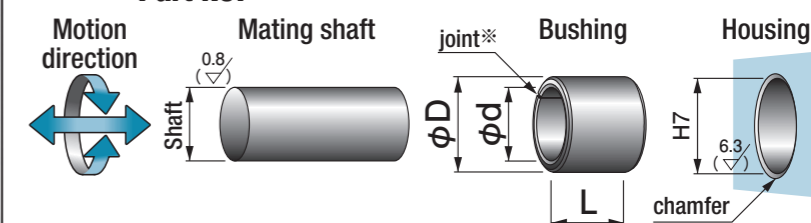


Specify Part No. by required I.D. and length.

(e.g.) I.D. is 12mm and length is 8mm.

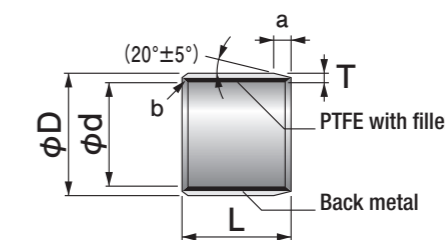
TCB - 1208

Part No.



● All Oiles Techmet products have I.D. machining allowance (0.2 mm for the diameter) and available on order.

※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

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

T	1.0	1.5
a	0.5	0.8

T	1.0	1.5
b	C0.3	C0.5

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

I.D.	O.D.	Tolerance	Length L								
ϕd	ϕD		4	5	6	7	8	10	12	15	20
5	7	+0.055 +0.025	0504	0505			0508				
6	8	+0.055 +0.025		0605	0606			0610			
8	10	+0.055 +0.025			0806		0808	0810	0812		
10	12	+0.060 +0.030			1006			1010			
12	14	+0.060 +0.030			1206		1208	1210			
14	16	+0.065 +0.035						1410		1415	
15	17	+0.065 +0.035						1510		1515	
16	18	+0.070 +0.035				1607		1610		1615	1620
18	20	+0.075 +0.040						1810		1815	1820
20	23	+0.080 +0.045						2010		2015	2020
22	25	+0.080 +0.045						2210			2220

※Outer diameter is measured by exclusive gauge.