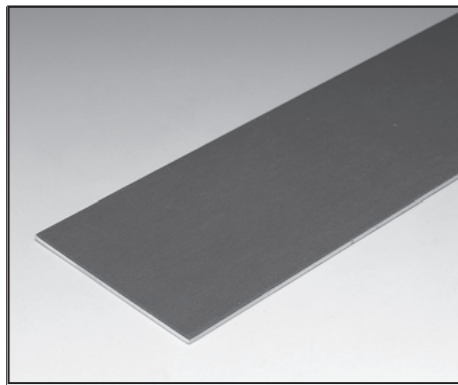
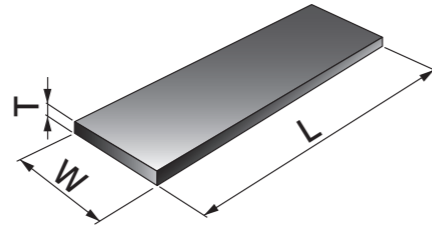


# LFP Oiles Drymet LF Plates



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
<b>LFP-1080</b>	1.0	-0.03 -0.13	80	500
<b>LFP-1590</b>	1.5	-0.03 -0.13	90	500
<b>LFP-20100</b>	2.0	-0.03 -0.13	100	500
<b>LFP-25100</b>	2.5	-0.03 -0.13	100	500

# Oiles LF Guides Guide unit bearings



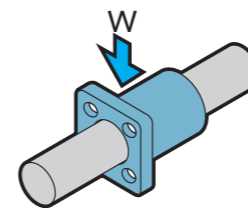
Standard product



## 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



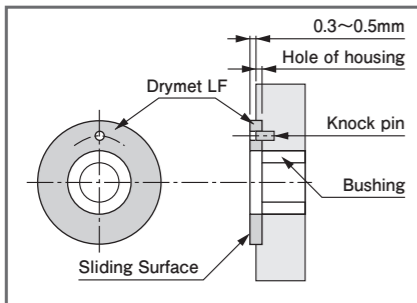
Part No.	Allowable load $W$ N [kgf]		Allowable velocity m/s [m/min]	Service temperature range °C
	Dynamic	Static		
<b>LFG12-30</b>	235 { 24}	706 { 72}	0.67 {40}	-30~+130*
<b>LFG16-37</b>	376 { 38}	1,129 {115}		
<b>LFG20-42</b>	588 { 60}	1,764 {180}		
<b>LFG25-59</b>	980 {100}	2,940 {300}		
<b>LFG30-64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

\*Temperature range for dust seal.

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

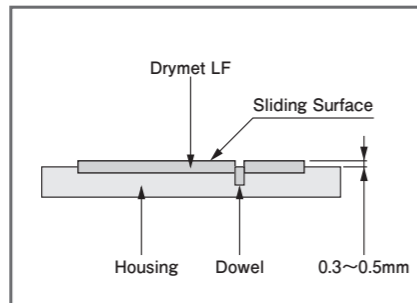
## How to attach washers, plates

### ① Knock pin method (Thrust washer)



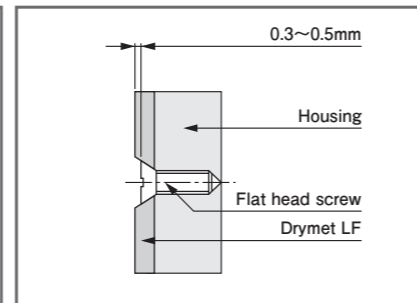
\*Sliding surface consists of a plastic layer.

### ② Inlay method (Plate)



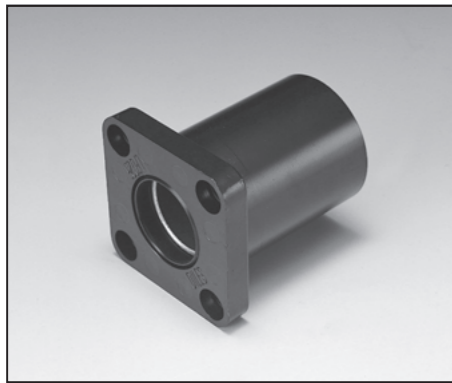
\*Sliding surface consists of a plastic layer.

### ③ Flat head screw method



### ④ Using glue

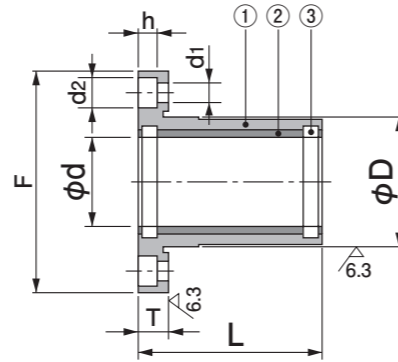
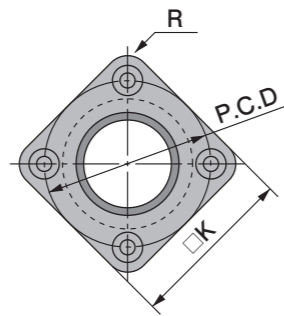
In the case of (2), the washer and plate may be inserted with glue, not a knock pin. Synthetic epoxy plastic glue is suitable, though no glue is specified, in particular. Be careful because fitting with glue only may result in separation in some cases.



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

**LFG 20 - 42**  
Part No.

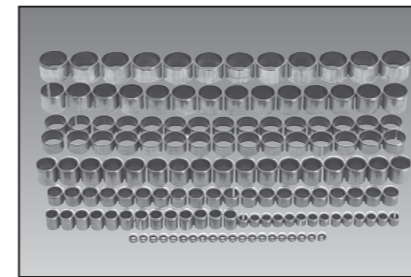
● Recommended mating shaft tolerance is g6 to e7.



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

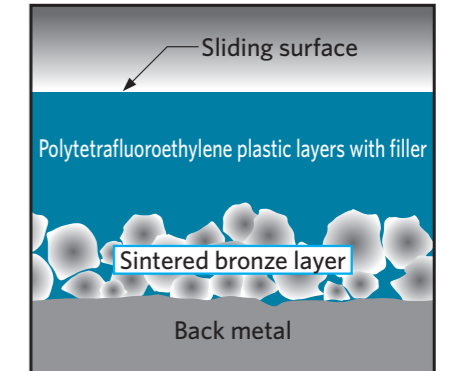
Part No.	I.D.		O.D.		Length		F	K	T	P.C.D	R	Mounting hole			Bolt
	$\phi d$	$\phi D$	Tolerance	L	Tolerance	d1						d2	h		
<b>LFG12-30</b>	12	21	$\begin{smallmatrix} -0.017 \\ -0.032 \end{smallmatrix}$	30	$\begin{smallmatrix} 0 \\ -0.3 \end{smallmatrix}$	42.8	32	6	32	3	4.5	8	4.1	M4	
<b>LFG16-37</b>	16	28	$\begin{smallmatrix} -0.017 \\ -0.032 \end{smallmatrix}$	37	$\begin{smallmatrix} 0 \\ -0.3 \end{smallmatrix}$	49.0	37	6	38	4	4.5	8	4.1	M4	
<b>LFG20-42</b>	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	
<b>LFG25-59</b>	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	
<b>LFG30-64</b>	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 <b>P</b> N/mm <sup>2</sup> {kgf/cm <sup>2</sup> }	19.5 (137) {199 (1,400)}
Allowable max. velocity <b>V</b> m/s {m/min}	2.50 {150}
Allowable max. <b>PV</b> value N/mm <sup>2</sup> · m/s {kgf/cm <sup>2</sup> · 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 ( $\leq 0.0017$ m/s {0.1m/min}).

### Mechanical properties

Tensile strength	JIS Z 2241	N/mm <sup>2</sup> {kgf/cm <sup>2</sup> }	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 12.5 $\mu$ m.

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.