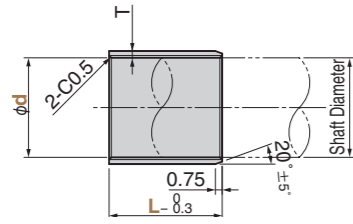


LBM

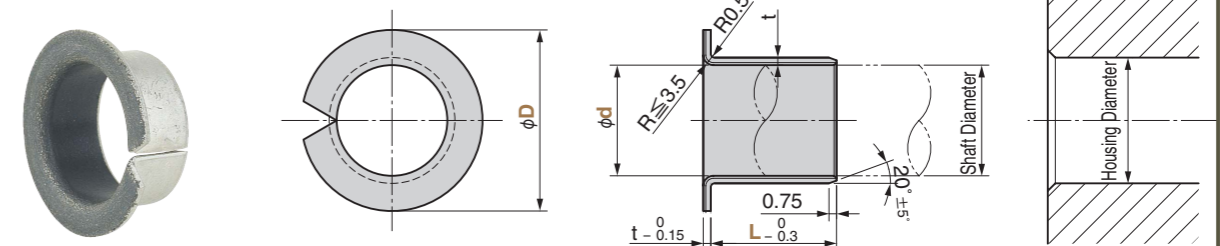


Order **Catalog No.** **LBM** **d** - **L**
100 - 30

Housing		Shaft		Dimension of Bushing				Catalog No.	d	L
I.D.	H7	O.D.	Tolerance	Tolerance I.D. after press-fit	O.D.	Tolerance	Thickness T			
									30	
									50	
105		100		100	105				70	
									80	
									95	
									100	
	+0.035 0								50	
110		105		105	110				90	
									100	
			+0.035 0						30	
									50	
115		110		110	115				70	
									100	
									30	
									50	
125		120		120	125		2.47	0 -0.050	70	
									95	
									100	
									50	
135		130		130	135			+0.185 +0.120	80	
									100	
	+0.040 0								50	
145		140		140	145			+0.200 +0.060	80	
									100	
			+0.035 -0.005						50	
155		150		150	155				80	
									100	
								+0.205 +0.140	50	
165		160		160	165				80	
									100	

* Tolerance I.D. after press-fit is for reference only.

LBMF



Sliding Direction

Material SO#936 FR

Operation Range

Lubricating Condition	Max. Allowable Load P N/mm ²				Operation Range Temperature °C
	Very Slow Movement	Rotation, Oscillation or Sliding	Change of Load 100,000 Times or Less	Change of Load 10 million Times or More	
No lubrication	147	59	29	15	-200 ~ +280

Physical Properties

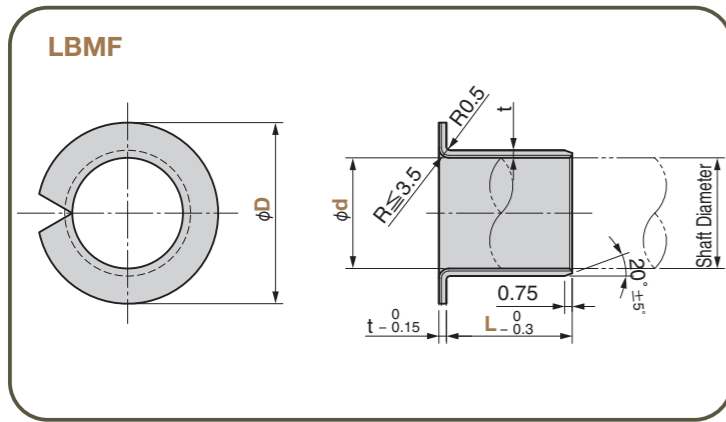
Compression Strength Mpa	Linear Expansion Coefficient × 10 ⁻⁶ /°C		Thermal Conductivity W / (m · K)
	Parallel to Bearing Surface	Vertical to Bearing Surface	
304	11	30	42

Refer to P. 139 for caution in using

Order **Catalog No.** **LBMF** **d** - **D** - **L**
06 - 12 - 08

Housing		Shaft		Dimension of Bushing				Catalog No.	d	D	L
I.D.	H7	O.D.	Tolerance	Tolerance I.D. after press-fit	O.D.	Tolerance	Thickness t				
4.6		3	-0.025 -0.034	3	+0.062 0	4.6	+0.047 +0.017	0.8		03	07
	+0.012 0									05	04
5.6		4		4		5.6				04	09
										06	04
7		5		5		7				05	10
										06	06
			-0.025 -0.037							04	05
8		6		6		8	+0.053 +0.023	0 -0.025		LBMF	06
										07	08
	+0.015 0				+0.065 0			1.0			10
										05	07
9		7		7		9				07	13
										10	12
			-0.025 -0.040							06	06
10		8		8		10	+0.055 +0.025			08	15
										10	12

* Tolerance I.D. after press-fit is for reference only.



Order **Catalog No.** **LBMF** **d** - **D** - **L**
LBMF **26** - **38** - **20**

Operation Range

Lubricating Condition	Max. Allowable Load P N/mm ²				Operation Range Temperature °C
	Very Slow Movement	Rotation, Oscillation or Sliding	Change of Load 100,000 Times or Less	Change of Load 10 million Times or More	
No lubrication	147	59	29	15	-200 ~ +280

Physical Properties

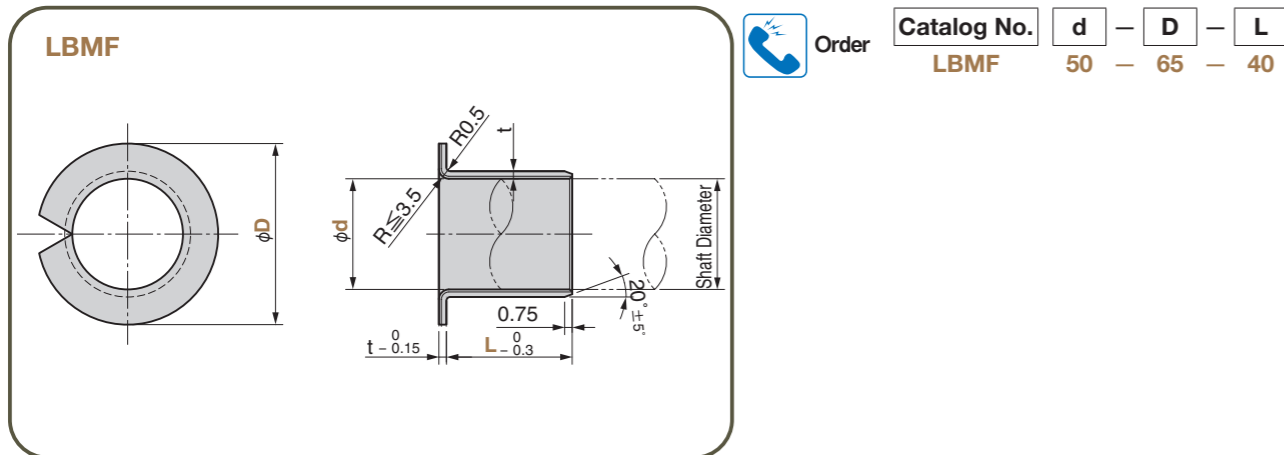
Compression Strength Mpa	Linear Expansion Coefficient × 10 ⁻⁶ /°C		Thermal Conductivity W / (m · K)
	Parallel to Bearing Surface	Vertical to Bearing Surface	
304	11	30	42

Housing		Shaft		Dimension of Bushing				Catalog No.	d	D	L
I.D.	H7	O.D.	Tolerance	Tolerance I.D. after press-fit	O.D.	Tolerance	Thickness t				
											06
											07
											08
12		10	-0.025 -0.040	10						10	18
											12
											15
											06
											07
											08
14		12		12						12	20
											12
											15
											20
											06
16		14		14						1.0	22
											12
											15
											20
											10
											12
17		15	-0.025 -0.043	15							15
											20
											25
											10
18		16		16							15
											20
											25
											10
20		18		18							12
											15
											20
											25

* Tolerance I.D. after press-fit is for reference only.

Housing		Shaft		Dimension of Bushing				Catalog No.	d	D	L
I.D.	H7	O.D.	Tolerance	Tolerance I.D. after press-fit	O.D.	Tolerance	Thickness t				
											10
											12
											15
23		20		20						20	31
											20
											25
											30
											10
											12
25		22		22						1.5	33
											15
											20
											25
											15
27		24		24							20
											25
											30
											10
											12
28		25	-0.025 -0.046	25							15
											20
											25
											30
											15
											20
											25
30		26		26							38
											15
											20
											12
32		28		28						0 -0.030	40
											15
											20
											30
											12
											15
34		30		30							42
											20
											25
											30
											40
35		31		31							45
											25
											20
36		32		32						2.0	46
											25
											30
											12
											20
39		35		35							49
											25
											30
											40
											20
42		38		38							52
											30
											40
											12
											20
44		40		40							54
											25
											30
											40

* Tolerance I.D. after press-fit is for reference only.



Operation Range

Lubricating Condition	Max. Allowable Load P N/mm ²				Operation Range Temperature °C
	Very Slow Movement	Rotation, Oscillation or Sliding	Change of Load 100,000 Times or Less	Change of Load 10 million Times or More	
No lubrication	147	59	29	15	-200 ~ +280

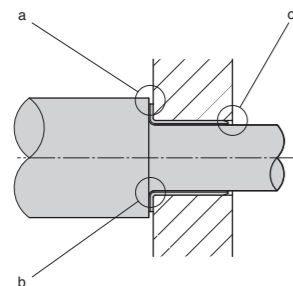
Physical Properties

Compression Strength Mpa	Linear Expansion Coefficient × 10 ⁻⁶ /°C		Thermal Conductivity W / (m · K)
	Parallel to Bearing Surface	Vertical to Bearing Surface	
304	11	30	42

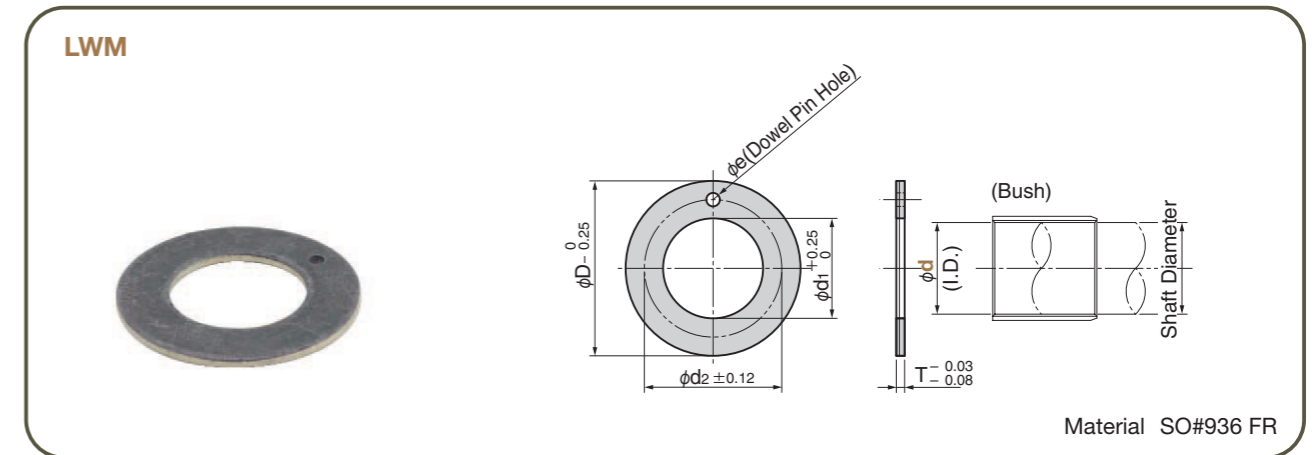
Housing		Shaft		Dimension of Bushing				Catalog No.	d	D	L
I.D.	H7	O.D.	Tolerance	Tolerance I.D. after press-fit	O.D.	Tolerance	Thickness t				
50	+0.025 0	45	-0.025 -0.050	45	+0.105 0	50	+0.115 +0.075				20 25 30 40
55		50		50		55		2.5	0 -0.040	LBMF	50 65 30 40
60	+0.030 0	55	-0.025 -0.055	55	+0.110 0	60	+0.145 +0.095				55 70 40 40
65		60		60		65					60 75 30 40

* Tolerance I.D. after press-fit is for reference only.

Caution in Using Flange Bush



- Make the shaft outer diameter larger than the flange outer diameter. In press fit, make the arbor diameter larger than the flange outer diameter.
- Chamfer on the shaft is 1R.
- Keep the bushing end inside the housing end.



Bush I.D. φ d	d ₁	D	T Thickness	d ₂	e	Housing Depth	Catalog No.	d
6	8	16		12	1.300			06
8	10	18		14	~1.100			08
10	12	24		18	1.875 ~1.625			10
12	14	26		20				12
14	16	30		23	2.375 ~2.125			14
16	18	32		25				16
18	20	36	1.5	28		1.20		18
20	22	38		30	3.375 ~3.125	~0.95	LWM	20
22	24	42		33				22
24	26	44		35				24
25	28	48		38				25
30	32	54		43				30
35	38	62		50	4.375			35
40	42	66		54	~4.125			40
45	48	74	2.0	61		1.70		45
50	52	78		65		~1.45		50



For Operation

- When a dowel pin is used for retention. Provide a step down on housing. Make step down dia larger by 0.05 to 0.15 mm. than thrust washer O.D. Make dowel pin top lower by 0.3 to 0.5 mm than washer face.
- When adhesive is used for retention. Adhesives can be used for thrust washer retention but in this case take the max.usable temperature and running condition into consideration for adhesive selection.

