

D.Linear Bearing



LINEAR BALL BUSHING



LM
LME
LMB



LM-AJ
LME-AJ
LMB-AJ



LM-OP
LME-OP
LMB-OP



LM-L
LME-L
LMB-L

FLANGED TYPE LINEAR BALL BUSHING



LM-L
LME-L
LMB-L



LMK
LMEK
LMBK



LMH



LMF-L
LMEF-L
LMBF-L



LMK-L
LMEK-L
LMBK-L



LMH-L

FLANGED SLIDE BUSH



LMFC
LMEFC
LMBFC



LMKC
LMEKC
LMBKC



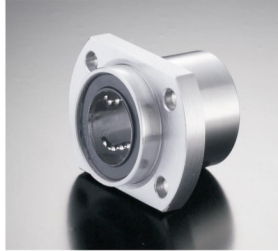
LMHC



LMF...UU-E



LMK...UU-E



LMH...UU-E



LMF...LUU-E



LMK...LUU-E



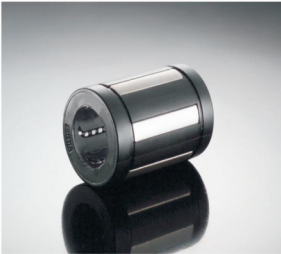
LMH...LUU-E

KH BUSHING



COMPACT RANGE
KH SERIES

SUPER LINEAR BALL BUSHING



LMES
LMBS



LMES-OP
LMBS-OP

LINEAR BALL BUSHING CASE UNIT



SC
SCE



SC-W
SCE-W

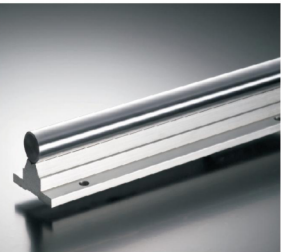


SC-V
SCE-V



SCJ

SUPPORT RAIL UNIT



SBS



TBS



SBR

SUPPORT RAIL UNIT



TBR

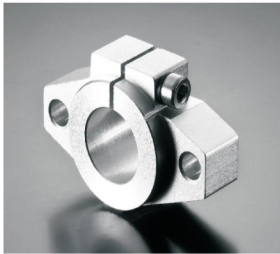


SBR-S

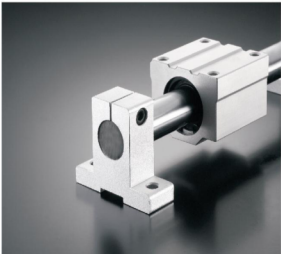


TBR-S

SHAFT SUPPORT



SHF



SK

FINE SHAFT



SF

< Linear Ball Bushing >

<KH series>

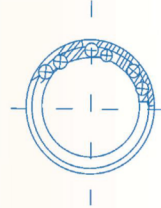
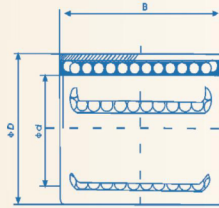
<LM. LME. LMB series>

<LMF.K. H series>

<LMF. K. H ...L series>



Standard Linear Ball Bearing Steel Drawn Cup/Cage Plastic



Dimensions [mm]

Load Capacity [N]

Weight [g]

Part-No.	ϕd	ϕD	B	Dyn.	Stat.	
KH-0622	6	12	22	400	240	7
KH-0824	8	15	24	440	280	12
KH-1026	10	17	26	500	370	14.5
KH-1228	12	19	28	620	510	18.5
KH-1428	14	21	28	710	530	20.5
KH-1630	16	24	30	800	630	27.5
KH-2030	20	28	30	950	800	32.5
KH-2540	25	35	40	1990	1560	66
KH-3050	30	40	50	2900	2700	95
KH-4060	40	52	60	5100	4500	182
KH-5070	50	62	70	6950	6300	252

Ordering Example:

KH
|
Standard linear Bearing

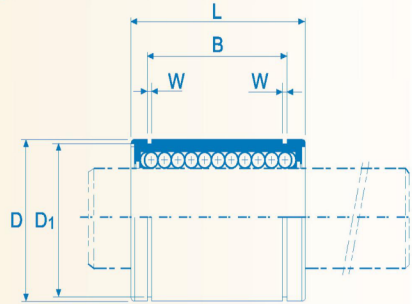
ϕ
|
Shaft Diameter

PP
|
P=seal one end,
PP=seal both ends

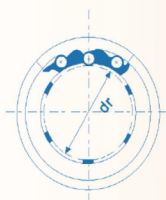
LM <Built-in Synthetics Resin Retainer>



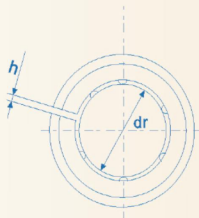
This type is a metric dimension series widely used in Japan and other countries



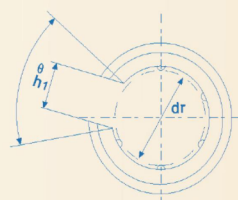
Nominal Part No.						Nominal Shaft Diameter (mm)	
Standard Type	Seal Type	Ball Circuit	Weight g	Adjustable Type	Open Type	dr	Tolerance
LM 4 LM 5	LM 4 UU LM 5 UU	4 4	2.0 4	— —	— —	4 5	$\begin{matrix} 0 \\ -0.008 \end{matrix}$
LM 6 LM 8S LM 8	LM 6 UU LM 8S UU LM 8 UU	4 4 4	8.5 11 17	LM 6-AJ LM 8S-AJ LM 8-AJ	— — —	6 8 8	$\begin{matrix} 0 \\ -0.008 \end{matrix}$
LM 10 LM 12 LM 13	LM 10 UU LM 12 UU LM 13 UU	4 4 4	36 42 49	LM 10-AJ LM 12-AJ LM 13-AJ	— — LM 12-OP LM 13-OP	10 12 13	$\begin{matrix} 0 \\ -0.009 \end{matrix}$
LM 16 LM 20 LM 25	LM 16 UU LM 20 UU LM 25 UU	5 5 6	76 100 240	LM 16-AJ LM 20-AJ LM 25-AJ	LM 16-OP LM 20-OP LM 25-OP	16 20 25	$\begin{matrix} 0 \\ -0.010 \end{matrix}$
LM 30 LM 35	LM 30 UU LM 35 UU	6 6	270 425	LM 30-AJ LM 35-AJ	LM 30-OP LM 35-OP	30 35 38	$\begin{matrix} 0 \\ -0.012 \end{matrix}$
LM 40 LM 50 LM 60	LM 40 UU LM 50 UU LM 60 UU	6 6 6	654 1700 2000	LM 40-AJ LM 50-AJ LM 60-AJ	LM 40-OP LM 50-OP LM 60-OP	40 50 60	$\begin{matrix} 0 \\ -0.015 \end{matrix}$



LM



LM...AJ



LM...OP

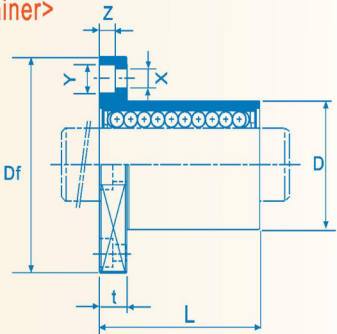
Major Dimensions and Tolerance (mm)										Eccentricity (max) μm	Radial Clearance (max) μm	Basic Load Rating C(N) Co(N)		Nominal Part No.
D	Tolerance	L	Tolerance	B	Tolerance	W	D1	h	h1	θ				
8	$\begin{matrix} 0 \\ -0.009 \end{matrix}$	12	$\begin{matrix} 0 \\ -0.12 \end{matrix}$	10.2	$\begin{matrix} 0 \\ -0.12 \end{matrix}$	1.1	9.6	—	—	—	8	-3	167 206	LM 4 LM 5
12	$\begin{matrix} 0 \\ -0.011 \end{matrix}$	19	$\begin{matrix} 0 \\ -0.12 \end{matrix}$	13.5	$\begin{matrix} 0 \\ -0.12 \end{matrix}$	1.1	11.5	1	—	—	12	-3	206 265	LM 6
15	$\begin{matrix} 0 \\ -0.011 \end{matrix}$	17	$\begin{matrix} 0 \\ -0.12 \end{matrix}$	11.5	$\begin{matrix} 0 \\ -0.12 \end{matrix}$	1.1	14.3	1	—	—	12	-3	176 225	LM 8S
15	$\begin{matrix} 0 \\ -0.011 \end{matrix}$	24	$\begin{matrix} 0 \\ -0.12 \end{matrix}$	17.5	$\begin{matrix} 0 \\ -0.12 \end{matrix}$	1.1	14.3	1	—	—	12	-3	265 402	LM 8
19	$\begin{matrix} 0 \\ -0.013 \end{matrix}$	29	$\begin{matrix} 0 \\ -0.2 \end{matrix}$	22	$\begin{matrix} 0 \\ -0.2 \end{matrix}$	1.3	18	1	—	—	12	-4	373 549	LM 10
21	$\begin{matrix} 0 \\ -0.013 \end{matrix}$	30	$\begin{matrix} 0 \\ -0.2 \end{matrix}$	23	$\begin{matrix} 0 \\ -0.2 \end{matrix}$	1.3	20	1.5	8	80°	12	-4	412 590	LM 12
23	$\begin{matrix} 0 \\ -0.013 \end{matrix}$	32	$\begin{matrix} 0 \\ -0.2 \end{matrix}$	23	$\begin{matrix} 0 \\ -0.2 \end{matrix}$	1.3	22	1.5	9	80°	12	-4	510 775	LM 13
28	$\begin{matrix} 0 \\ -0.016 \end{matrix}$	37	$\begin{matrix} 0 \\ -0.2 \end{matrix}$	26.5	$\begin{matrix} 0 \\ -0.2 \end{matrix}$	1.6	27	1.5	11	80°	12	-6	775 1180	LM 16
32	$\begin{matrix} 0 \\ -0.016 \end{matrix}$	42	$\begin{matrix} 0 \\ -0.2 \end{matrix}$	30.5	$\begin{matrix} 0 \\ -0.2 \end{matrix}$	1.6	30.5	1.5	11	60°	15	-6	863 1370	LM 20
40	$\begin{matrix} 0 \\ -0.016 \end{matrix}$	59	$\begin{matrix} 0 \\ -0.2 \end{matrix}$	41	$\begin{matrix} 0 \\ -0.2 \end{matrix}$	1.85	38	2	12	50°	15	-6	980 1570	LM 25
45	$\begin{matrix} 0 \\ -0.019 \end{matrix}$	64	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	44.5	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	1.85	43	2.5	15	50°	15	-8	1570 2750	LM 30
52	$\begin{matrix} 0 \\ -0.019 \end{matrix}$	70	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	49.5	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	2.1	49	2.5	17	50°	20	-8	1670 3140	LM 35
60	$\begin{matrix} 0 \\ -0.022 \end{matrix}$	80	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	60.5	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	2.1	57	3	20	50°	20	-10	2162 4020	LM 40
80	$\begin{matrix} 0 \\ -0.022 \end{matrix}$	100	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	74	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	2.6	76.5	3	25	50°	20	-13	3820 7940	LM 50
90	$\begin{matrix} 0 \\ -0.022 \end{matrix}$	110	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	85	$\begin{matrix} 0 \\ -0.3 \end{matrix}$	3.15	86.5	3	30	50°	25	-13	4710 10000	LM 60

SI Unit 1N=0.102kgf

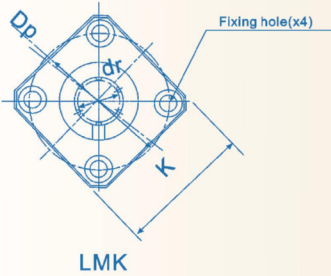
LMK <Built-in Synthetics Resin Retainer>



This type is a metric dimension series widely used in Japan and other countries



Nominal Part No.				Major Dimensions and Tolerance (mm)			
Standard Type	Seal Type	Ball Circuit	Weight g	dr Tolerance	D Tolerance	L Tolerance	—
LMK 6	LMK 6 UU	4	18	6 [0 / -0.009]	12 [0 / -0.013]	19 [0 / -0.013]	
LMK 8S	LMK 8S UU	4	24	8 [0 / -0.009]	15 [0 / -0.013]	17 [0 / -0.013]	
LMK 8	LMK 8 UU	4	29	8 [0 / -0.009]	15 [0 / -0.013]	24 [0 / -0.013]	
LMK 10	LMK 10 UU	4	52	10 [0 / -0.009]	19 [0 / -0.013]	29 [0 / -0.013]	
LMK 12	LMK 12 UU	4	57	12 [0 / -0.009]	21 [0 / -0.016]	30 [0 / -0.016]	
LMK 13	LMK 13 UU	4	72	13 [0 / -0.009]	23 [0 / -0.016]	32 [0 / -0.016]	
LMK 16	LMK 16 UU	5	104	16 [0 / -0.009]	28 [0 / -0.016]	37 [0 / -0.016]	
LMK 20	LMK 20 UU	5	145	20 [0 / -0.010]	32 [0 / -0.019]	42 [0 / -0.019]	±0.3
LMK 25	LMK 25 UU	6	300	25 [0 / -0.010]	40 [0 / -0.019]	59 [0 / -0.019]	
LMK 30	LMK 30 UU	6	375	30 [0 / -0.010]	45 [0 / -0.019]	64 [0 / -0.019]	
LMK 35	LMK 35 UU	6	560	35 [0 / -0.012]	52 [0 / -0.022]	70 [0 / -0.022]	
LMK 40	LMK 40 UU	6	880	40 [0 / -0.012]	60 [0 / -0.022]	80 [0 / -0.022]	
LMK 50	LMK 50 UU	6	2000	50 [0 / -0.012]	80 [0 / -0.022]	100 [0 / -0.022]	
LMK 60	LMK 60 UU	6	2560	60 [0 / -0.015]	90 [0 / -0.025]	110 [0 / -0.025]	



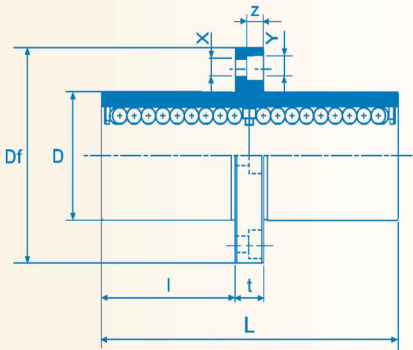
Major Dimensions and Tolerance (mm)							Eccentricity μ m	Squareness μ m	Basic Load Rating		Nominal Part No.
Flange									Dynamic C(N)	Static Co(N)	
Df	K	t	Dp	X	Y	Z					
28	22	5	20	3.5	6	3.1	12	12	206	265	LMK 6
32	25	5	24	3.5	6	3.1	12	12	176	216	LMK 8S
32	25	5	24	3.5	6	3.1	12	12	274	392	LMK 8
40	30	6	29	4.5	7.5	4.1	12	12	372	549	LMK 10
42	32	6	32	4.5	7.5	4.1	12	12	510	784	LMK 12
43	34	6	33	4.5	7.5	4.1	12	12	510	784	LMK 13
48	37	6	38	4.5	7.5	4.1	12	12	774	1,180	LMK 16
54	42	8	43	5.5	9	5.1	15	15	882	1,370	LMK 20
62	50	8	51	5.5	9	5.1	15	15	980	1,570	LMK 25
74	58	10	60	6.6	11	6.1	15	15	1,570	2,740	LMK 30
82	64	10	67	6.6	11	6.1	20	20	1,670	3,140	LMK 35
96	75	13	78	9	14	8.1	20	20	2,160	4,020	LMK 40
116	92	13	98	9	14	8.1	20	20	3,820	7,940	LMK 50
134	106	18	112	11	17	11.1	25	25	4,700	10,000	LMK 60

SI Unit 1N $\approx$ 0.102kgf

LMFC <Resin Retainer>

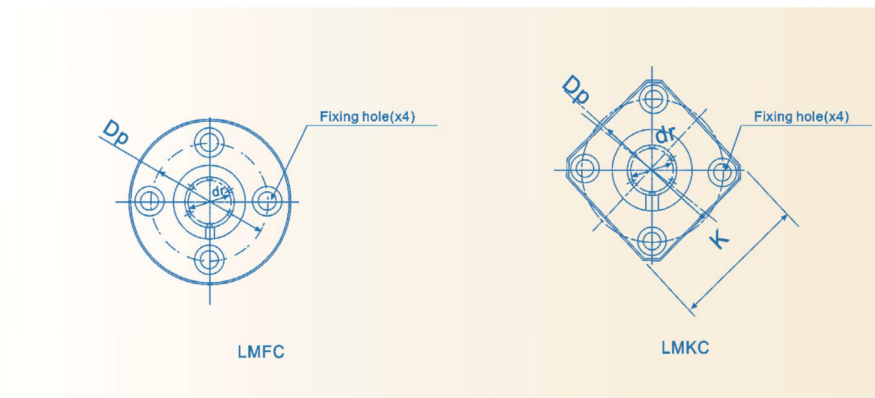


This type is a metric dimension series widely used in Japan and other countries.



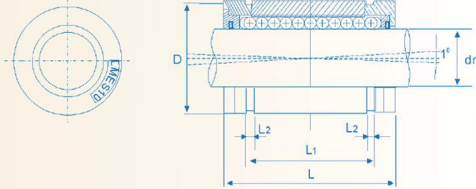
Nominal shaft diameter mm	Part No.		Major dimensions and tolerance								
	LMFC	LMKC	dr		D		L		Flange		
			mm	Tolerance μ m	mm	Tolerance μ m	mm	Tolerance μ m	I mm	Df mm	K mm
6	LMFC6	LMKC6	6	0 -10	12	0	35	±300	15	28	22
8	LMFC8	LMKC8	8		15	-13	45		20	32	25
10	LMFC10	LMKC10	10		19	0 -16	55		24.5	40	30
12	LMFC12	LMKC12	12		21		57		25.5	42	32
13	LMFC13	LMKC13	13		23		61		27.5	43	34
16	LMFC16	LMKC16	16		28		70		32	48	37
20	LMFC20	LMKC20	20	0 -12	32	0 -19	80		36	54	42
25	LMFC25	LMKC25	25		40		112		52	62	50
30	LMFC30	LMKC30	30		45		123		56.5	74	58
35	LMFC35	LMKC35	35	0 -15	52	0 -22	135		62.5	82	64
40	LMFC40	LMKC40	40		60		151		69	96	75
50	LMFC50	LMKC50	50		80		192		89.5	116	92
60	LMFC60	LMKC60	60		90	0 -25	209		95.5	134	106

Seal type:
LMFC10 UUJ



Major dimensions and tolerance					Eccentricity	Squareness	Basic load rating		Weight	Nominal shaft diameter
Flange							dynamic C(N)	Static Co(N)		
t mm	Dp mm	X mm	Y mm	Z mm	μ m	μ m				
5	20	3.5	6	3.1	15	15	323	530	31 25	6
5	24	3.5	6	3.1			431	784	51 43	8
6	29	4.5	7.5	4.1			588	1,100	98 78	10
6	32	4.5	7.5	4.1			813	1,570	110 90	12
6	33	4.5	7.5	4.1			813	1,570	130 108	13
6	38	4.5	7.5	4.1			1,230	2,350	190 165	16
8	43	5.5	9	5.1	20	20	1,400	2,740	260 225	20
8	51	5.5	9	5.1			1,560	3,140	540 500	25
10	60	6.6	11	6.1			2,490	5,490	680 590	30
10	67	6.6	11	6.1	25	25	2,850	6,270	1,020 930	35
13	78	9	14	8.1			3,430	8,040	1,570 1,380	40
13	98	9	14	8.1			6,080	15,900	3,600 3,400	50
18	112	11	17	11.1	30	30	7,550	20,000	4,500 4,060	60

LMES Series



Shaft Dia. (mm)	Standard Type				Dimensions (mm)				Diametral Clearance		Basic Load Ratings	
	Part number		No.of Ball circuit	Wgt. (g)	D ¹⁾	L ±0.2	L1 ±0.2	L2 min	dr (mm)	Tol. (μm)	Dynamic C (N)	Static Co (N)
	w/o seal	with seal										
10	LMES 10	LMES 10UU	5	17	19	29	21.7	1.35	10	+8 0	750	550
12	LMES 12	LMES 12UU	5	23	22	32	22.7	1.35	12		1230	1100
16	LMES 16	LMES 16UU	5	28	26	36	24.7	1.35	16	+9 1	1550	1250
20	LMES 20	LMES 20UU	6	61	32	45	31.3	1.65	20		2580	1670
25	LMES 25	LMES 25UU	6	122	40	58	43.8	1.90	25	+11 1	3800	2750
30	LMES 30	LMES 30UU	6	185	47	68	51.8	1.90	30		4710	2800
40	LMES 40	LMES 40UU	6	360	62	80	60.4	2.20	40	+13 2	6500	5720
50	LMES 50	LMES 50UU	6	580	75	100	77.4	2.70	50		11460	7940

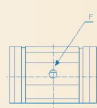
¹⁾Based on nominal housing bore



LMES12-OP



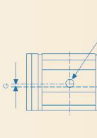
LMES16-OP LMES20-OP



LMES25-OP



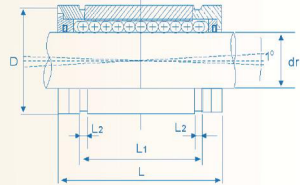
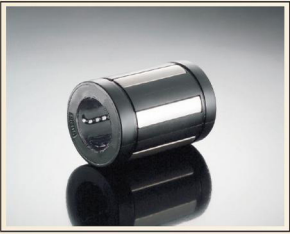
LMES30-OP LMES40-OP LMES50-OP



Shaft Dia. (mm)	Open Type				Dimensions (mm)								Basic Load Ratings	
	Part number		No. of Ball circuit	Wgt. (g)	D ¹⁾	L ±0.2	L2	h	θ (°)	F	G	J	Dynamic C (N)	Static Co (N)
	w/o seal	with seal												
12	LMES 12OP	LMES 12UUOP	4	18	22	32	1.35	6.5	66	3.0	—	0.7	1290	1260
16	LMES 16OP	LMES 16UUOP	4	22	26	36	1.35	9	68		—	0.7	1640	1320
20	LMES 20OP	LMES 20UUOP	5	51	32	45	1.65	9	55		—	0.9	2630	1720
25	LMES 25OP	LMES 25UUOP	5	102	40	58	1.90	11.5	57		1.5	1.4	3910	2850
30	LMES 30OP	LMES 30UUOP	5	155	47	68	1.90	14	57		2.0	2.2	4850	2900
40	LMES 40OP	LMES 40UUOP	5	300	62	80	2.20	19.5	56		1.5	2.7	6700	5900
50	LMES 50OP	LMES 50UUOP	5	480	75	100	2.70	22.5	54		2.5	2.3	11700	8100

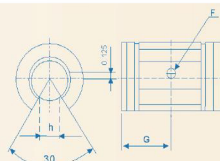
1N=0.102kgf

LMBS Series

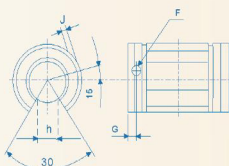


Shaft Dia. (inch)	Standard Type				Dimensions (inch)						Basic Load Ratings	
	Part number		No. of Ball circuit	Wgt. (lbf)	Working Bore Diameter		D ⁽¹⁾	L	L ₁	L ₂ min	Dynamic C (lbr)	Static Co (lbr)
					dr	Tol.						
1/4	LMBS 4	LMBS 4UU	4	0.01	0.2500	0 -0.0005	0.5000	0.750/0.735	0.511/0.501	0.039	57	49
3/8	LMBS 6	LMBS 6UU	4	0.02	0.3750		0.6250	0.875/0.860	0.699/0.689	0.039	78	66
1/2	LMBS 8	LMBS 8UU	4	0.05	0.5000		0.8750	1.250/1.230	1.032/1.012	0.050	190	190
5/8	LMBS 10	LMBS 10UU	5	0.08	0.6250		1.1250	1.500/1.480	1.105/1.095	0.056	290	340
3/4	LMBS 12	LMBS 12UU	6	0.14	0.7500		1.2500	1.625/1.605	1.270/1.250	0.056	500	430
1	LMBS 16	LMBS 16UU	6	0.29	1.0000	0 -0.0006	1.5625	2.250/2.230	1.884/1.864	0.070	820	780
1-1/4	LMBS 20	LMBS 20UU	6	0.40	1.2500		2.0000	2.625/2.600	2.004/1.984	0.068	1240	1270
1-1/2	LMBS 24	LMBS 24UU	6	0.80	1.5000		2.3750	3.000/2.970	2.410/2.390	0.086	1510	1540
2	LMBS 32	LMBS 32UU	6	1.38	2.0000	0 -0.0008	3.0000	4.000/3.960	3.193/3.163	0.105	2230	2580

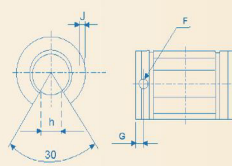
¹⁾Based on nominal housing bore



LMBS08-OP



LMBS10-OP



LMBS12-OP through LMBS32-OP

Shaft Dia. (inch)	Open Type				Dimensions (inch)							Basic Load Ratings	
	Part number		No. of Ball circuit	Wgt. (lbf)	D ¹⁾	L	F	G	J	L ₂ (min)	h	Dynamic C (lbf)	Static Co (lbf)
	w/o seal	with seal											
1 / 2	LMBS 8OP	LMBS 8UUOP	3	0.03	0.8750	1.250/1.230	0.14	0.63	Thru	0.050	0.32	210	190
5 / 8	LMBS 10OP	LMBS 10UUOP	4	0.06	1.1250	1.500/1.480	0.11	0.13	0.039	0.056	0.38	320	340
3 / 4	LMBS 12OP	LMBS 12UUOP	5	0.11	1.2500	1.625/1.605	0.14	0.13	0.059	0.056	0.43	510	430
1	LMBS 16OP	LMBS 16UUOP	5	0.21	1.5625	2.250/2.230	0.14	0.13	0.047	0.070	0.56	830	780
1-1 / 4	LMBS 20OP	LMBS 20UUOP	5	0.35	2.0000	2.625/2.600	0.20	0.19	0.090	0.068	0.63	1250	1270
1-1 / 2	LMBS 24OP	LMBS 24UUOP	5	0.67	2.3750	3.000/2.970	0.20	0.19	0.090	0.086	0.75	1520	1540
2	LMBS 32OP	LMBS 32UUOP	5	1.10	3.0000	4.000/3.960	0.27	0.31	Thru	0.105	1.00	2250	2580

¹⁾Based on nominal housing bore