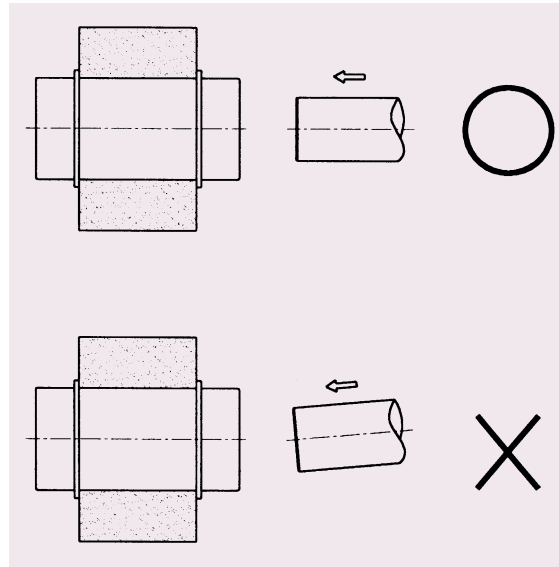


Insertion of Shaft

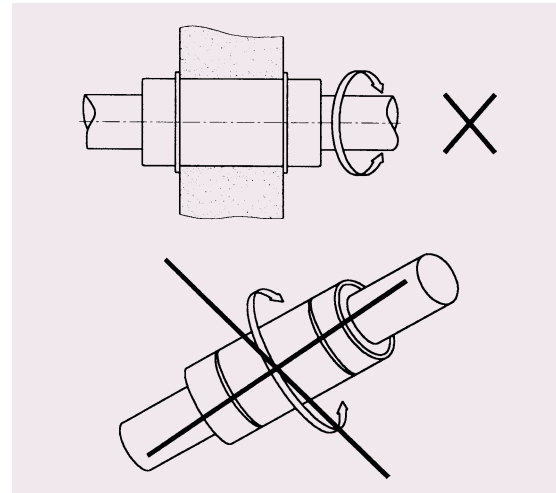
Care must be taken to align the bushing and the shaft when inserting a shaft into a linear bushing. If the shaft is inserted with slanted, balls may depart from the damaged or deformed retainer.



Insertion of shaft into Linear Bearing

The Rotational Motion Prohibited

Linear Bushing is not suitable for rotational motion. If the Linear Bushing is exposed to rotational motion it may lead unexpected accidents.



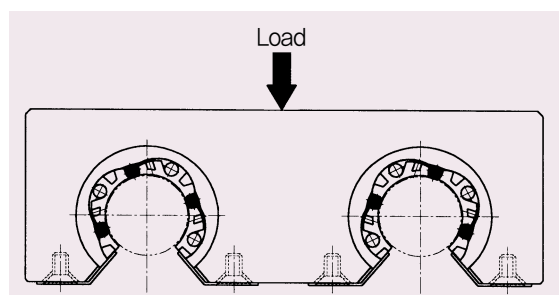
The Rotational Motion Prohibited

When Moment loads applied

External loads should be distributed uniformly on a Linear Bushing. When moment loads are applied, two or more Linear Bushings should be used on one LM shaft, and the distance between two Linear Bushings should have enough distance. When the moment loads are applied, calculate the equivalent load and choose the proper Linear Bushing.

Mounting of open type Linear Bushing with three ball rows

Please mount the open type Linear Bushings with three ball circuit as same as Figure for considering of load distribution.



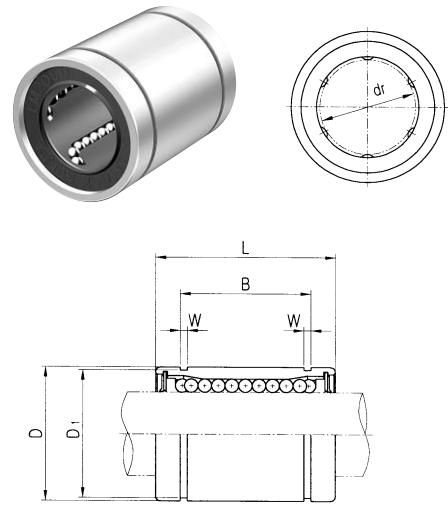
Installation example of LM12, LM13

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ASIAN Standard



LM CLOSED LINEAR BUSHING



Samick Linear Bushing	LM	20	UU	-	A	N	S
Nominal Shaft Diameter							
Seal							
Blank : No Seal U : One Side Seal UU : Both Side Seal							
Retainer							
Blank : Resin retainer(Standard) A : Steel retainer(High temperature)							
Outer-sleeves (by corrosion resistance type)							
Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment							
Ball type (by corrosion resistance)							
Blank : High carbon bearing steel ball (standard) S : Stainless steel ball							

PART NUMBER	WORKING BORE DIAMETER		D	L	B	W	D ₁	BASIC LOAD RATING(N)		NO. OF BALL	WEIGHT (gf)
	Resin	Steel						dr.	CLEARANCE		
LM5		5	10	15	10.2	1.1	9.6	167	206	4	4
LM6	LM6-A	6	12	19	13.5	1.1	11.5	200	260	4	8
LM8S		8	15	17	11.5	1.1	14.3	170	220	4	11
LM8	LM8-A	8	15	24	17.5	1.1	14.3	260	400	4	16
LM10	LM10-A	10	19	29	22.0	1.3	18	370	540	4	30
LM12	LM12-A	12	21	30	23.0	1.3	20	410	590	4	31.5
LM13	LM13-A	13	23	32	23.0	1.3	22	500	770	4	43
LM16	LM16-A	16	28	37	26.5	1.6	27	770	1170	5	69
LM20	LM20-A	20	32	42	30.5	1.6	30.5	860	1370	5	87
LM25	LM25-A	25	40	59	41.0	1.85	38	980	1560	6	220
LM30		30	45	64	44.5	1.85	43	1560	2740	6	250
LM35		35	52	70	49.5	2.1	49	1660	3130	6	390
LM40		40	60	80	60.5	2.1	57	2150	4010	6	585
LM50		50	80	100	74.0	2.6	76.5	3820	7930	6	1580
LM60		60	90	110	85.0	3.15	86.5	4700	9990	6	2000
LM80		80	120	140	105.5	4.15	116	10130	12000	6	4100

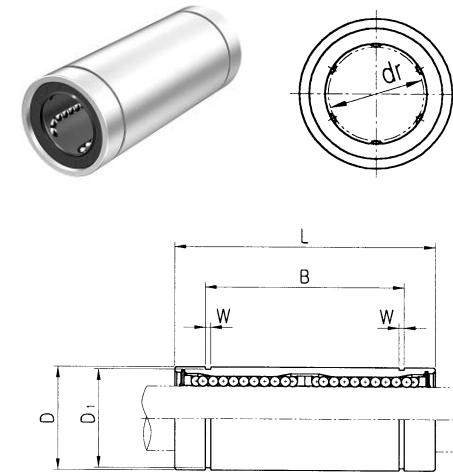
Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≅ 0.102kgf

LM_L LONG LINEAR BUSHING



Samick Linear Bushing	LM	20	L	UU	-	A	N	S
Nominal Shaft Diameter								
Linear Bushing Long type (for high load)								
Seal								
Blank : No Seal U : One Side Seal UU : Both Side Seal								
Retainer								
Blank : Resin retainer(Standard) A : Steel retainer(High temperature)								
Outer-sleeves (by corrosion resistance type)								
Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment								
Ball type (by corrosion resistance)								
Blank : High carbon bearing steel ball (standard) S : Stainless steel ball								

PART NUMBER	WORKING BORE DIAMETER		D	L	B	W	D ₁	BASIC LOAD RATING(N)		NO. OF BALL	WEIGHT (gf)
	Resin	Steel						dr.	CLEARANCE		
LM6L	LM6L-A	6	12	35	27	1.1	11.5	320	520	4	16
LM8L	LM8L-A	8	15	45	35	1.1	14.3	430	780	4	31
LM10L	LM10L-A	10	19	55	44	1.3	18	580	1100	4	62
LM12L	LM12L-A	12	21	57	46	1.3	20	650	1200	4	80
LM13L	LM13L-A	13	23	61	46	1.3	22	810	1570	4	90
LM16L	LM16L-A	16	28	70	53	1.6	27	1230	2350	5	145
LM20L	LM20L-A	20	32	80	61	1.6	30.5	1400	2750	5	180
LM25L	LM25L-A	25	40	112	82	1.85	38	1560	3140	6	440
LM30L		30	45	123	89	1.85	43	2490	5490	6	580
LM35L		35	52	135	99	2.1	49	2650	6470	6	795
LM40L		40	60	154	121	2.1	57	3430	8040	6	1170
LM50L		50	80	192	148	2.6	76.5	6080	15900	6	3100
LM60L		60	90	211	170	3.15	86.5	7650	20000	6	3500

Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

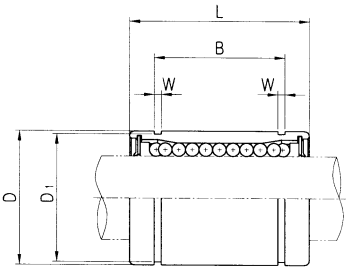
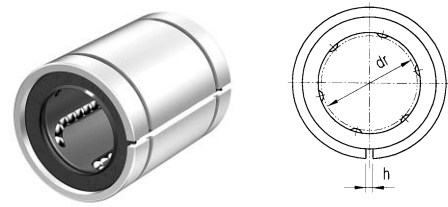
Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≅ 0.102kgf



LM_AJ ADJUSTABLE LINEAR BUSHING



Samick Linear Bushing LM 20 UU AJ - A N S												
Nominal Shaft Diameter												
Seal												
Blank : No Seal												
U : One Side Seal												
UU : Both Side Seal												
Linear Bushing Adjustable type												
Retainer												
Blank : Resin retainer(Standard)												
A : Steel retainer(High temperature)												
Outer-sleeves (by corrosion resistance type)												
Blank : No-plating(Standard)												
N : Electroless nickel plating												
R : Raydent treatment												
Ball type (by corrosion resistance)												
Blank : High carbon bearing steel ball (standard)												
S : Stainless steel ball												

PART NUMBER	WORKING BORE DIAMETER	D	L	B	W	h	D ₁	BASIC LOAD RATING(N)		NO. OF BALL CIRCUIT	WEIGHT (gf)	
								DYNAMIC(C)	STATIC(C ₀)			
Resin	Steel	dr. CLEARANCE	mm CLEARANCE	mm CLEARANCE	mm CLEARANCE							
LM6 AJ	LM6 AJ-A	6	12	19	13.5	1.1	1	11.5	200	260	4	8
LM8S AJ		8	15	17 ^{-0.011}	11.5	1.1	1	14.3	170	220	4	11
LM8 AJ	LM8 AJ-A	8	15	24	17.5	1.1	1	14.3	260	400	4	16
LM10 AJ	LM10 AJ-A	10	19 ^{-0.009}	29	22.0	1.3	1	18	370	540	4	30
LM12 AJ	LM12 AJ-A	12	21	30 ^{-0.2}	23.0	1.3	1.5	20	410	590	4	31.5
LM13 AJ	LM13 AJ-A	13	23	32 ^{-0.013}	23.0	1.3	1.5	22	500	770	4	43
LM16 AJ	LM16 AJ-A	16	28	37	26.5	1.6	1.5	27	770	1170	5	69
LM20 AJ	LM20 AJ-A	20	32	42	30.5	1.6	1.5	30.5	860	1370	5	87
LM25 AJ	LM25 AJ-A	25	40 ^{-0.010}	59 ^{-0.016}	41.0	1.85	2	38	980	1560	6	220
LM30 AJ		30	45	64	44.5	1.85	2.5	43	1560	2740	6	250
LM35 AJ		35	52	70	49.5	2.1	2.5	49	1660	3130	6	390
LM40 AJ		40	60 ^{-0.012}	80 ^{-0.019}	60.5	2.1	3	57	2150	4010	6	585
LM50 AJ		50	80	100	74.0	2.6	3	76.5	3820	7930	6	1580
LM60 AJ		60	90	110	85.0	3.15	3	86.5	4700	9990	6	2000
LM80 AJ		80	120 ^{-0.015}	140 ^{-0.022}	105.5	4.15	3	116	10130	12000	6	4500

Note 1) Dynamic load rating is based on the nominal life of 50km.
 In case of 100km, C on the table need to be divided by 1,26
 Ex) LM12's 50km basis dynamic load rating C = 410N
 LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

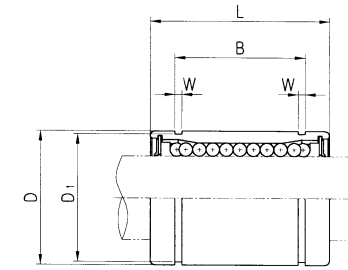
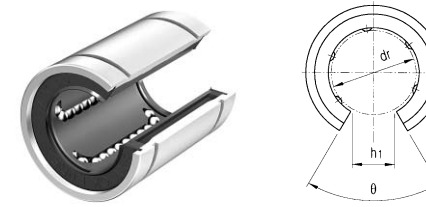
Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) Outer diameter is the obtained value before the slotting process.

Note 5) 1N ≅ 0.102kgf

LM_OP OPEN LINEAR BUSHING



Samick Linear Bushing LM 20 UU OP - A N S												
Nominal Shaft Diameter												
Seal												
Blank : No Seal												
U : One Side Seal												
UU : Both Side Seal												
Linear Bushing Open type												
Retainer												
Blank : Resin retainer(Standard)												
A : Steel retainer(High temperature)												
Outer-sleeves (by corrosion resistance type)												
Blank : No-plating(Standard)												
N : Electroless nickel plating												
R : Raydent treatment												
Ball type (by corrosion resistance)												
Blank : High carbon bearing steel ball (standard)												
S : Stainless steel ball												

PART NUMBER	WORKING BORE DIAMETER	D	L	B	W	h ₁	θ	BASIC LOAD RATING(N)		NO. OF BALL CIRCUIT	WEIGHT (gf)
								DYNAMIC(C)	STATIC(C ₀)		
Resin	dr. CLEARANCE	mm CLEARANCE	mm CLEARANCE	mm CLEARANCE							
LM12 OP	12	21	30	23.0	1.3	8	80	410	590	3	31.5
LM13 OP	13	23 ^{-0.009}	32 ^{-0.013}	23.0	1.3	9	80	500	770	3	43
LM16 OP	16	28	37 ^{-0.2}	26.5	1.6	11	80	770	1170	4	69
LM20 OP	20	32	42	30.5	1.6	11	60	860	1370	4	87
LM25 OP	25	40 ^{-0.010}	59 ^{-0.016}	41.0	1.85	12	50	980	1560	5	220
LM30 OP	30	45	64	44.5	1.85	15	50	1560	2740	5	250
LM35 OP	35	52	70	49.5	2.1	17	50	1660	3130	5	390
LM40 OP	40	60 ^{-0.012}	80 ^{-0.019}	60.5	2.1	20	50	2150	4010	5	585
LM50 OP	50	80	100	74.0	2.6	25	50	3820	7930	5	1580
LM60 OP	60	90 ^{-0.015}	110 ^{-0.022}	85.0	3.15	30	50	4700	9990	5	2000
LM80 OP	80	120	140	105.5	4.15	30	50	10130	12000	5	4500

Note 1) Dynamic load rating is based on the nominal life of 50km.
 In case of 100km, C on the table need to be divided by 1,26
 Ex) LM12's 50km basis dynamic load rating C = 410N
 LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

Note 2) Based on the weight of resin retainer

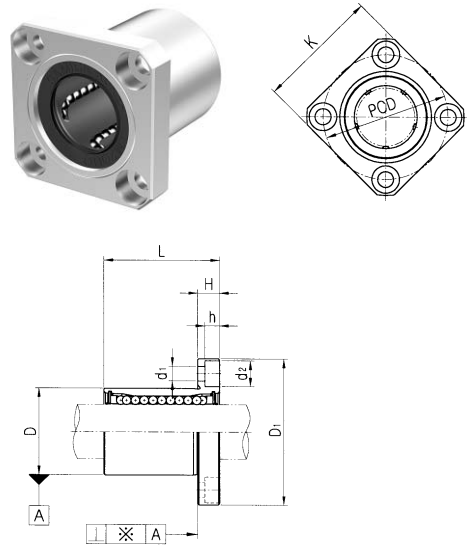
Note 3) Dimension : mm

Note 4) Outer diameter is the obtained value before the slotting process.

Note 5) 1N ≅ 0.102kgf



LMK FLANGED LINEAR BUSHING



Samick Square Flanged Linear Bushing	LMK	20	UU	-	A	N	S
Nominal Shaft Diameter							
Seal							
Blank : No Seal U : One Side Seal UU : Both Side Seal							
Retainer							
Blank : Resin retainer(Standard) A : Steel retainer(High temperature)							
Outer-sleeves (by corrosion resistance type)							
Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment							
Ball type (by corrosion resistance)							
Blank : High carbon bearing steel ball (standard) S : Stainless steel ball							

PART NUMBER	WORKING BORE DIAMETER	D		L	D ₁	H	PCD	K	d ₁	d ₂	h	SQUARENESS	BASIC LOAD RATING(N)		NO. OF BALL	WEIGHT
		dr. CLEARANCE	mm CLEARANCE										DYNAMIC(C)	STATIC(C ₀)		
LMK6	LMK6-A	6	12	19	28	5	20	22	3.4	6.5	3.3	12	200	260	4	26.5
LMK8S		8	15 ^{-0.011}	17	32	5	24	25	3.4	6.5	3.3	12	170	220	4	34
LMK8	LMK8-A	8	15	24	32	5	24	25	3.4	6.5	3.3	12	260	400	4	40
LMK10	LMK10-A	10	19 ^{-0.009}	29	40	6	29	30	4.5	8.0	4.4	12	370	540	4	78
LMK12	LMK12-A	12	21	30	42	6	32	32	4.5	8.0	4.4	12	410	590	4	76
LMK13	LMK13-A	13	23 ^{-0.013}	32	43	6	33	34	4.5	8.0	4.4	12	500	770	4	94
LMK16	LMK16-A	16	28	37	48	6	38	37	4.5	8.0	4.4	12	770	1170	5	134
LMK20	LMK20-A	20	32	42	54	8	43	42	5.5	9.5	5.4	15	860	1370	5	180
LMK25	LMK25-A	25	40 ^{-0.010}	59 ^{-0.016}	62	8	51	50	5.5	9.5	5.4	15	980	1560	6	340
LMK30		30	45	64	74	10	60	58	6.6	11.0	6.5	15	1560	2740	6	460
LMK35		35	52	70	82	10	67	64	6.6	11.0	6.5	20	1660	3130	6	795
LMK40		40	60 ^{-0.012}	80 ^{-0.019}	96 ^{-0.3}	13	78	75	9.0	14.0	8.6	20	2150	4010	6	1054
LMK50		50	80	100	116	13	98	92	9.0	14.0	8.6	20	3820	7930	6	2200
LMK60		60	90 ^{-0.015}	110 ^{-0.022}	134 ^{-0.3}	18	112	106	11.0	17.5	10.8	25	4700	9990	6	2960
LMK80		80	120	140	164	18	142	136	11.0	17.5	11.1	25	10130	12000	6	4900

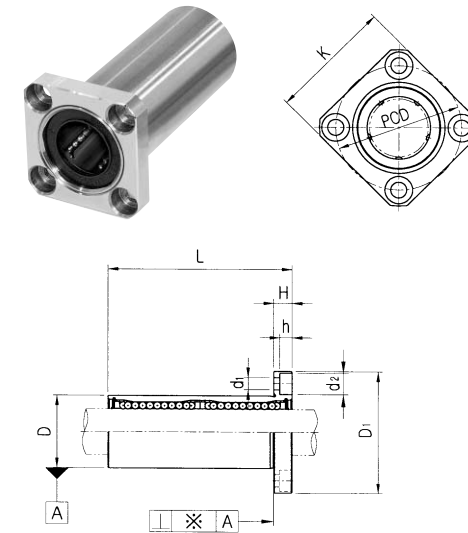
Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≅ 0.102kgf

LMK_L FLANGED LINEAR BUSHING LONG



Samick Square Flanged Linear Bushing	LMK	20	L	UU	-	A	N	S
Nominal Shaft Diameter								
Linear Bushing Long type (for high load)								
Seal								
Blank : No Seal U : One Side Seal UU : Both Side Seal								
Retainer								
Blank : Resin retainer(Standard) A : Steel retainer(High temperature)								
Outer-sleeves (by corrosion resistance type)								
Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment								
Ball type (by corrosion resistance)								
Blank : High carbon bearing steel ball (standard) S : Stainless steel ball								

PART NUMBER	WORKING BORE DIAMETER	D		L	D ₁	H	PCD	K	d ₁	d ₂	h	SQUARENESS	BASIC LOAD RATING(N)		NO. OF BALL	WEIGHT
		dr. CLEARANCE	mm CLEARANCE										DYNAMIC(C)	STATIC(C ₀)		
LMK6 L	LMK6L-A	6	12	35	28	5	20	22	3.4	6.5	3.3	15	320	520	4	31
LMK8 L	LMK8L-A	8	15 ^{-0.013}	45	32	5	24	25	3.4	6.5	3.3	15	430	780	4	53
LMK10 L	LMK10L-A	10	19	55	40	6	29	30	4.5	8.0	4.4	15	580	1100	4	105
LMK12 L	LMK12L-A	12	21 ^{-0.010}	57	42	6	32	32	4.5	8.0	4.4	15	650	1200	4	100
LMK13 L	LMK13L-A	13	23 ^{-0.016}	61	43	6	33	34	4.5	8.0	4.4	15	810	1570	4	130
LMK16 L	LMK16L-A	16	28	70	48	6	38	37	4.5	8.0	4.4	15	1230	2350	5	187
LMK20 L	LMK20L-A	20	32	80	54	8	43	42	5.5	9.5	5.4	20	1400	2750	5	260
LMK25 L	LMK25L-A	25	40 ^{-0.012}	112 ^{-0.019}	62	8	51	50	5.5	9.5	5.4	20	1560	3140	6	515
LMK30 L		30	45	123	74	10	60	58	6.6	11.0	6.5	20	2490	5490	6	655
LMK35 L		35	52	135	82	10	67	64	6.6	11.0	6.5	25	2650	6470	6	970
LMK40 L		40	60 ^{-0.015}	154 ^{-0.022}	96 ^{-0.4}	13	78	75	9.0	14.0	8.6	25	3430	8040	6	1560
LMK50 L		50	80 ^{-0.015}	192 ^{-0.022}	116 ^{-0.3}	13	98	92	9.0	14.0	8.6	25	6080	15900	6	3500
LMK60 L		60	90 ^{-0.020}	211 ^{-0.025}	134	18	112	106	11.0	17.5	10.8	30	7650	20000	6	4500

Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

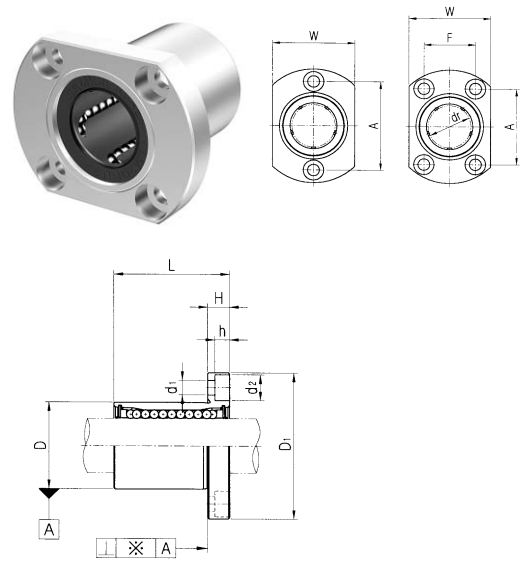
Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≅ 0.102kgf



LMH FLANGED LINEAR BUSHING



Samick Oval Flanged Linear Bushing	LMH	20	UU	-	A	N	S
Nominal Shaft Diameter							
Seal		Blank : No Seal U : One Side Seal UU : Both Side Seal					
Retainer		Blank : Resin retainer(Standard) A : Steel retainer(High temperature)					
Outer-sleeves (by corrosion resistance type)		Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment					
Ball type (by corrosion resistance)		Blank : High carbon bearing steel ball (standard) S : Stainless steel ball					

PART NUMBER	WORKING BORE DIAMETER	D	L	D ₁	H	W	A	F	d ₁	d ₂	h	SQUARENESS	BASIC LOAD RATING(N)		NO. OF BALLS	WEIGHT	
													DYNAMIC(C)	STATIC(C ₀)			
Resin	Steel	d _r	CLEARANCE	CLEARANCE	CLEARANCE	CLEARANCE						※(μm)					
LMH6	LMH6-A	6	12	19	28	5	18	20	-	3.4	6.5	3.3	12	200	260	4	26.5
LMH8	LMH8-A	8	15	24	32	5	21	24	-	3.4	6.5	3.3	12	260	400	4	40
LMH10	LMH10-A	10	19	29	40	6	25	29	-	4.5	8.0	4.4	12	370	540	4	78
LMH12	LMH12-A	12	21	30	42	6	27	32	-	4.5	8.0	4.4	12	410	590	4	76
LMH13	LMH13-A	13	23	32	43	6	29	33	-	4.5	8.0	4.4	12	500	770	4	94
LMH16	LMH16-A	16	28	37	48	6	34	31	22	4.5	8.0	4.4	12	770	1170	5	134
LMH20	LMH20-A	20	32	42	54	8	38	36	24	5.5	9.5	5.4	15	860	1370	5	180
LMH25	LMH25-A	25	40	59	62	8	46	40	32	5.5	9.5	5.4	15	980	1560	6	340
LMH30		30	45	64	74	10	51	49	35	6.6	11.0	6.5	15	1560	2740	6	460

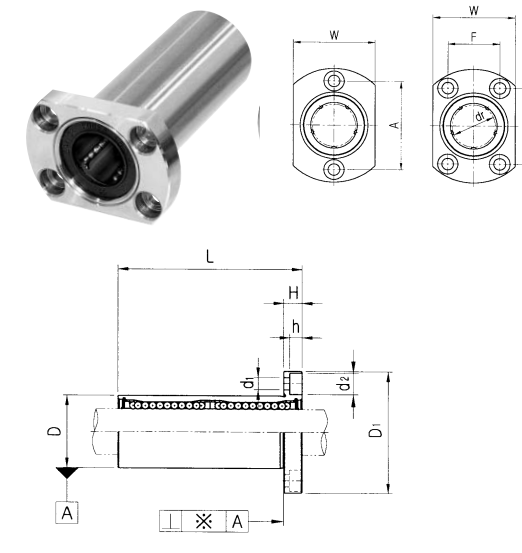
Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≒ 0.102kgf

LMH_L FLANGED LINEAR BUSHING LONG



Samick Oval Flanged Linear Bushing	LMH	20	L	UU	-	A	N	S
Nominal Shaft Diameter								
Linear Bushing Long type (for high load)								
Seal		Blank : No Seal U : One Side Seal UU : Both Side Seal						
Retainer		Blank : Resin retainer(Standard) A : Steel retainer(High temperature)						
Outer-sleeves (by corrosion resistance type)		Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment						
Ball type (by corrosion resistance)		Blank : High carbon bearing steel ball (standard) S : Stainless steel ball						

PART NUMBER	WORKING BORE DIAMETER	D	L	D ₁	H	W	A	F	d ₁	d ₂	h	SQUARENESS	BASIC LOAD RATING(N)		NO. OF BALLS	WEIGHT	
													DYNAMIC(C)	STATIC(C ₀)			
Resin	Steel	d _r	CLEARANCE	CLEARANCE	CLEARANCE	CLEARANCE						※(μm)					
LMH6 L	LMH6L-A	6	12	35	28	5	18	20	-	3.4	6.5	3.3	15	320	520	4	31
LMH8 L	LMH8L-A	8	15	45	32	5	21	24	-	3.4	6.5	3.3	15	430	780	4	53
LMH10 L	LMH10L-A	10	19	55	40	6	25	29	-	4.5	8.0	4.4	15	580	1100	4	105
LMH12 L	LMH12L-A	12	21	57	42	6	27	32	-	4.5	8.0	4.4	15	650	1200	4	100
LMH13 L	LMH13L-A	13	23	61	43	6	29	33	-	4.5	8.0	4.4	15	810	1570	4	130
LMH16 L	LMH16L-A	16	28	70	48	6	34	31	22	4.5	8.0	4.4	15	1230	2350	5	187
LMH20 L	LMH20L-A	20	32	80	54	8	38	36	24	5.5	9.5	5.4	20	1400	2750	5	260
LMH25 L	LMH25L-A	25	40	112	62	8	46	40	32	5.5	9.5	5.4	20	1560	3140	6	515
LMH30 L		30	45	123	74	10	51	49	35	6.6	11.0	6.5	20	2490	5490	6	655

Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

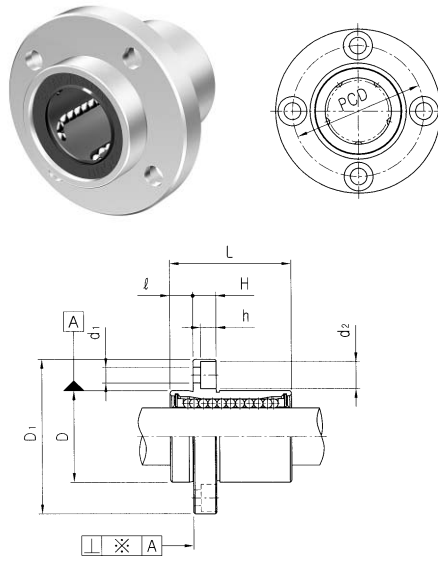
Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≒ 0.102kgf



LMFP FLANGED LINEAR BUSHING



Samick Circular Pilot Flanged Linear Bushing		LMFP	20	UU	-	A	N	S
Nominal Shaft Diameter								
Seal		Blank : No Seal U : One Side Seal UU : Both Side Seal						
Retainer		Blank : Resin retainer(Standard) A : Steel retainer(High temperature)						
Outer-sleeves (by corrosion resistance type)		Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment						
Ball type (by corrosion resistance)		Blank : High carbon bearing steel ball (standard) S : Stainless steel ball						

PART NUMBER	WORKING BORE DIAMETER	D	L	D ₁	l	H	PCD	d ₁	d ₂	h	SQUARENESS	BASIC LOAD RATING(N)		NO. OF BALL	WEIGHT	
												DYNAMIC(C)	STATIC(C ₀)			
Resin	Steel	dr. CLEARANCE	mm CLEARANCE	mm CLEARANCE	mm CLEARANCE	mm	mm	mm	mm	mm	μm				(gf)	
LMFP6	LMFP6-A	6	12	19	28	5	5	20	3.4	6.5	3.3	12	200	260	4	26.5
LMFP8	LMFP8-A	8	15	24	32	5	5	24	3.4	6.5	3.3	12	260	400	4	40
LMFP10	LMFP10-A	10	19	29	40	6	6	29	4.5	8	4.4	12	370	540	4	76
LMFP12	LMFP12-A	12	21	30	42	6	6	32	4.5	8	4.4	12	410	590	4	78
LMFP13	LMFP13-A	13	23	32	43	6	6	33	4.5	8	4.4	12	500	770	4	94
LMFP16	LMFP16-A	16	28	37	48	6	6	38	4.5	8	4.4	12	770	1170	5	134
LMFP20	LMFP20-A	20	32	42	54	8	8	43	5.5	9.5	5.4	15	860	1370	5	180
LMFP25	LMFP25-A	25	40	59	62	8	8	51	5.5	9.5	5.4	15	980	1560	6	340
LMFP30		30	45	64	74	10	10	60	6.6	11	6.5	15	1560	2740	6	460
LMFP35		35	52	70	82	10	10	67	6.6	11	6.5	20	1660	3130	6	795
LMFP40		40	60	80	96	13	13	78	9	14	8.6	20	2150	4010	6	1054
LMFP50		50	80	100	116	13	13	98	9	14	8.6	20	3820	7930	6	2200
LMFP60		60	90	110	134	18	18	112	11	17.5	10.8	25	4700	9990	6	2960

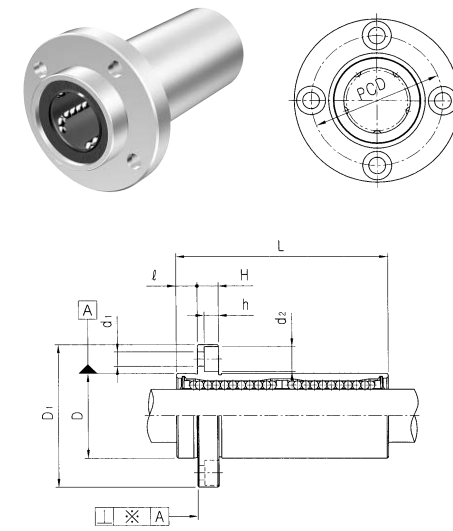
Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≅ 0.102kgf

LMFP_L FLANGED LINEAR BUSHING LONG



Samick Circular Pilot Flanged Linear Bushing		LMFP	20	L	UU	-	A	N	S
Nominal Shaft Diameter									
Linear Bushing Long type (for high load)									
Seal		Blank : No Seal U : One Side Seal UU : Both Side Seal							
Retainer		Blank : Resin retainer(Standard) A : Steel retainer(High temperature)							
Outer-sleeves (by corrosion resistance type)		Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment							
Ball type (by corrosion resistance)		Blank : High carbon bearing steel ball (standard) S : Stainless steel ball							

PART NUMBER	WORKING BORE DIAMETER	D	L	D ₁	l	H	PCD	d ₁	d ₂	h	SQUARENESS	BASIC LOAD RATING(N)		NO. OF BALL	WEIGHT	
												DYNAMIC(C)	STATIC(C ₀)			
Resin	Steel	dr. CLEARANCE	mm CLEARANCE	mm CLEARANCE	mm CLEARANCE	mm	mm	mm	mm	mm	μm				(gf)	
LMFP6L	LMFP6L-A	6	12	35	28	5	5	20	3.4	6.5	3.3	15	320	520	4	31
LMFP8L	LMFP8L-A	8	15	45	32	5	5	24	3.4	6.5	3.3	15	430	780	4	53
LMFP10L	LMFP10L-A	10	19	55	40	6	6	29	4.5	8	4.4	15	580	1100	4	105
LMFP12L	LMFP12L-A	12	21	57	42	6	6	32	4.5	8	4.4	15	650	1200	4	100
LMFP13L	LMFP13L-A	13	23	61	43	6	6	33	4.5	8	4.4	15	810	1570	4	130
LMFP16L	LMFP16L-A	16	28	70	48	6	6	38	4.5	8	4.4	15	1230	2350	5	187
LMFP20L	LMFP20L-A	20	32	80	54	8	8	43	5.5	9.5	5.4	20	1400	2750	5	260
LMFP25L	LMFP25L-A	25	40	112	62	8	8	51	5.5	9.5	5.4	20	1560	3140	6	515
LMFP30L		30	45	123	74	10	10	60	6.6	11	6.5	20	2490	5490	6	655
LMFP35L		35	52	135	82	10	10	67	6.6	11	6.5	25	2650	6470	6	970
LMFP40L		40	60	154	96	13	13	78	9	14	8.6	25	3430	8040	6	1560
LMFP50L		50	80	192	116	13	13	98	9	14	8.6	25	6080	15900	6	3500
LMFP60L		60	90	211	134	18	18	112	11	17.5	10.8	30	7650	20000	6	4500

Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

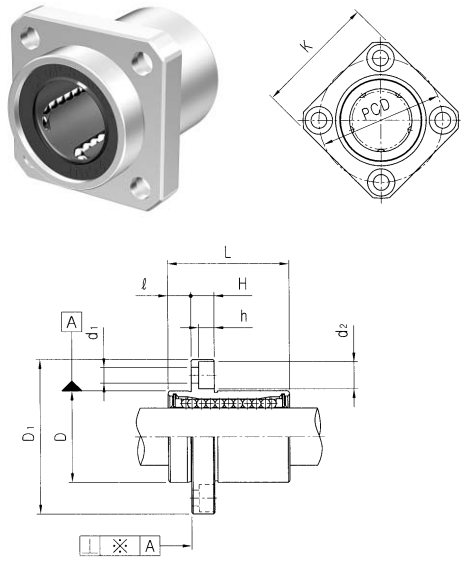
Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≅ 0.102kgf



LMKP FLANGED LINEAR BUSHING



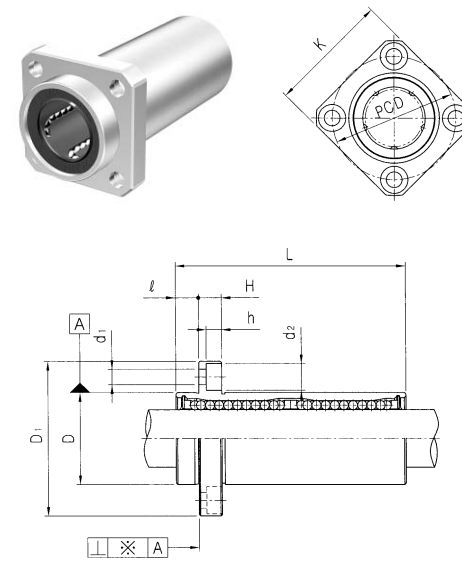
Samick Square Pilot Flanged Linear Bushing		LMKP	20	UU	-	A	N	S
Nominal Shaft Diameter								
Seal		Blank : No Seal U : One Side Seal UU : Both Side Seal						
Retainer		Blank : Resin retainer(Standard) A : Steel retainer(High temperature)						
Outer-sleeves (by corrosion resistance type)		Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment						
Ball type (by corrosion resistance)		Blank : High carbon bearing steel ball (standard) S : Stainless steel ball						

PART NUMBER	WORKING BORE DIAMETER	D	L	D ₁	ℓ	H	PCD	K	d ₁	d ₂	h	SQUARENESS	BASIC LOAD RATING(N)		NO. OF BALLS	WEIGHT	
													DYNAMIC(C)	STATIC(C ₀)			
Resin	Steel	dr. CLEARANCE	mm CLEARANCE	mm CLEARANCE	mm CLEARANCE	mm	mm	mm	mm	mm	mm	μm				(gf)	
LMKP6	LMKP6-A	6	12	19	28	5	5	20	22	3.4	6.5	3.3	12	200	260	4	26.5
LMKP8	LMKP8-A	8	15	24	32	5	5	24	25	3.4	6.5	3.3	12	260	400	4	40
LMKP10	LMKP10-A	10	19	29	40	6	6	29	30	4.5	8	4.4	12	370	540	4	76
LMKP12	LMKP12-A	12	21	30	42	6	6	32	32	4.5	8	4.4	12	410	590	4	78
LMKP13	LMKP13-A	13	23	32	43	6	6	33	34	4.5	8	4.4	12	500	770	4	94
LMKP16	LMKP16-A	16	28	37	48	6	6	38	37	4.5	8	4.4	12	770	1170	5	134
LMKP20	LMKP20-A	20	32	42	54	8	8	43	42	5.5	9.5	5.4	15	860	1370	5	180
LMKP25	LMKP25-A	25	40	59	62	8	8	51	50	5.5	9.5	5.4	15	980	1560	6	340
LMKP30		30	45	64	74	10	10	60	58	6.6	11	6.5	15	1560	2740	6	460
LMKP35		35	52	70	82	10	10	67	64	6.6	11	6.5	20	1660	3130	6	795
LMKP40		40	60	80	96	13	13	78	75	9	14	8.6	20	2150	4010	6	1054
LMKP50		50	80	100	116	13	13	98	92	9	14	8.6	20	3820	7930	6	2200
LMKP60		60	90	110	134	18	18	112	106	11	17.5	10.8	25	4700	9990	6	2960



Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N
Note 2) Based on the weight of resin retainer
Note 3) Dimension : mm
Note 4) 1N ≅ 0.102kgf

LMKP_L FLANGED LINEAR BUSHING LONG

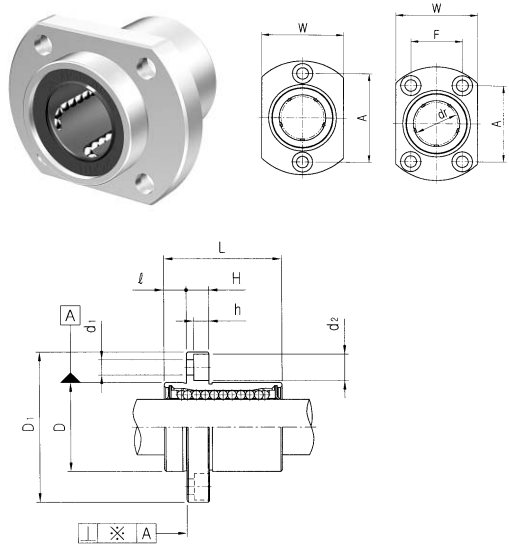


Samick Square Pilot Flanged Linear Bushing		LMKP	20	L	UU	-	A	N	S
Nominal Shaft Diameter									
Linear Bushing Long type (for high load)									
Seal		Blank : No Seal U : One Side Seal UU : Both Side Seal							
Retainer		Blank : Resin retainer(Standard) A : Steel retainer(High temperature)							
Outer-sleeves (by corrosion resistance type)		Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment							
Ball type (by corrosion resistance)		Blank : High carbon bearing steel ball (standard) S : Stainless steel ball							

PART NUMBER	WORKING BORE DIAMETER	D	L	D ₁	ℓ	H	PCD	K	d ₁	d ₂	h	SQUARENESS	BASIC LOAD RATING(N)		NO. OF BALLS	WEIGHT	
													DYNAMIC(C)	STATIC(C ₀)			
Resin	Steel	dr. CLEARANCE	mm CLEARANCE	mm CLEARANCE	mm CLEARANCE	mm	mm	mm	mm	mm	mm	μm				(gf)	
LMKP6L	LMKP6L-A	6	12	35	28	5	5	20	22	3.4	6.5	3.3	15	320	520	4	31
LMKP8L	LMKP8L-A	8	15	45	32	5	5	24	25	3.4	6.5	3.3	15	430	780	4	53
LMKP10L	LMKP10L-A	10	19	55	40	6	6	29	30	4.5	8	4.4	15	580	1100	4	105
LMKP12L	LMKP12L-A	12	21	57	42	6	6	32	32	4.5	8	4.4	15	650	1200	4	100
LMKP13L	LMKP13L-A	13	23	61	43	6	6	33	34	4.5	8	4.4	15	810	1570	4	130
LMKP16L	LMKP16L-A	16	28	70	48	6	6	38	37	4.5	8	4.4	15	1230	2350	5	187
LMKP20L	LMKP20L-A	20	32	80	54	8	8	43	42	5.5	9.5	5.4	20	1400	2750	5	260
LMKP25L	LMKP25L-A	25	40	112	62	8	8	51	50	5.5	9.5	5.4	20	1560	3140	6	515
LMKP30L		30	45	123	74	10	10	60	58	6.6	11	6.5	20	2490	5490	6	655
LMKP35L		35	52	135	82	10	10	67	64	6.6	11	6.5	25	2650	6470	6	970
LMKP40L		40	60	154	96	13	13	78	75	9	14	8.6	25	3430	8040	6	1560
LMKP50L		50	80	192	116	13	13	98	92	9	14	8.6	25	6080	15900	6	3500
LMKP60L		60	90	211	134	18	18	112	106	11	17.5	10.8	30	7650	20000	6	4500

Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N
Note 2) Based on the weight of resin retainer
Note 3) Dimension : mm
Note 4) 1N ≅ 0.102kgf

LMHP FLANGED LINEAR BUSHING



Samick Oval Pilot Flanged Linear Bushing		LMHP	20	UU	-	A	N	S
Nominal Shaft Diameter								
Seal	Blank : No Seal U : One Side Seal UU : Both Side Seal							
Retainer	Blank : Resin retainer(Standard) A : Steel retainer(High temperature)							
Outer-sleeves (by corrosion resistance type)	Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment							
Ball type (by corrosion resistance)	Blank : High carbon bearing steel ball (standard) S : Stainless steel ball							

PART NUMBER	WORKING BORE DIAMETER	D	L	D ₁	ℓ	H	W	A	F	d ₁	d ₂	h	SQUARENESS BASIC LOAD RATING(N)			NO. OF BALLS	WEIGHT (gf)	
													※(μm)	DYNAMIC(C)	STATIC(C ₀)			
LMHP6	LMHP6-A	6	12	19	28	5	5	18	20	3.4	6.5	3.3	12	200	260	4	26.5	
LMHP8	LMHP8-A	8	15 ^{-0.011}	24	32	5	5	21	24	3.4	6.5	3.3	12	260	400	4	40	
LMHP10	LMHP10-A	10	19	29	40	6	6	25	29	4.5	8	4.4	12	370	540	4	76	
LMHP12	LMHP12-A	12	21 ^{-0.009}	30 ^{-0.2}	42	6	6	27	32	4.5	8	4.4	12	410	590	4	78	
LMHP13	LMHP13-A	13	23 ^{-0.013}	32 ^{-0.2}	43	6	6	29	33	4.5	8	4.4	12	500	770	4	94	
LMHP16	LMHP16-A	16	28	37	48	6	6	34	31	22	4.5	8	4.4	12	770	1170	5	134
LMHP20	LMHP20-A	20	32	42	54	8	8	38	36	24	5.5	9.5	5.4	15	860	1370	5	180
LMHP25	LMHP25-A	25	40 ^{-0.010}	59 ^{-0.016}	62	8	8	46	40	32	5.5	9.5	5.4	15	980	1560	6	340
LMHP30		30	45	64 ^{-0.3}	74	10	10	51	49	35	6.6	11	6.5	15	1560	2740	6	460

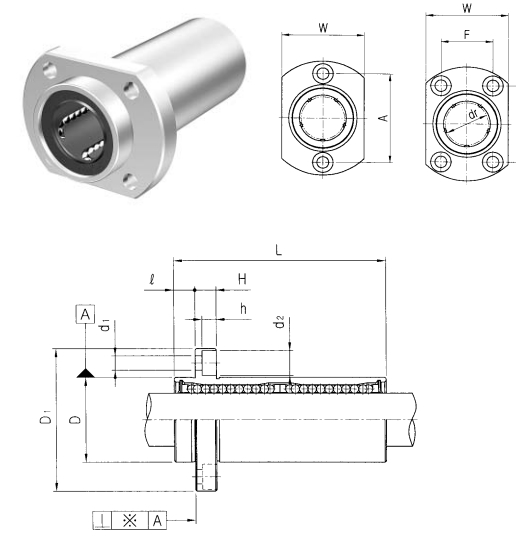
Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≒ 0.102kgf

LMHP_L FLANGED LINEAR BUSHING LONG



Samick Oval Pilot Flanged Linear Bushing		LMHP	20	L	UU	-	A	N	S
Nominal Shaft Diameter									
Linear Bushing Long type(for high load)									
Seal	Blank : No Seal U : One Side Seal UU : Both Side Seal								
Retainer	Blank : Resin retainer(Standard) A : Steel retainer(High temperature)								
Outer-sleeves (by corrosion resistance type)	Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment								
Ball type (by corrosion resistance)	Blank : High carbon bearing steel ball (standard) S : Stainless steel ball								

PART NUMBER	WORKING BORE DIAMETER	D	L	D ₁	ℓ	H	W	A	F	d ₁	d ₂	h	SQUARENESS BASIC LOAD RATING(N)			NO. OF BALLS	WEIGHT (gf)	
													※(μm)	DYNAMIC(C)	STATIC(C ₀)			
LMHP6L	LMHP6L-A	6	12	35	28	5	5	18	20	3.4	6.5	3.3	15	320	520	4	31	
LMHP8L	LMHP8L-A	8	15 ^{-0.013}	45	32	5	5	21	24	3.4	6.5	3.3	15	430	780	4	53	
LMHP10L	LMHP10L-A	10	19	55	40	6	6	25	29	4.5	8	4.4	15	580	1100	4	105	
LMHP12L	LMHP12L-A	12	21 ^{-0.010}	57 ^{-0.3}	42	6	6	27	32	4.5	8	4.4	15	650	1200	4	100	
LMHP13L	LMHP13L-A	13	23 ^{-0.016}	61 ^{-0.2}	43	6	6	29	33	4.5	8	4.4	15	810	1570	4	130	
LMHP16L	LMHP16L-A	16	28	70	48	6	6	34	31	22	4.5	8	4.4	15	1230	2350	5	187
LMHP20L	LMHP20L-A	20	32	80	54	8	8	38	36	24	5.5	9.5	5.4	20	1400	2750	5	260
LMHP25L	LMHP25L-A	25	40 ^{-0.012}	112 ^{-0.4}	62	8	8	46	40	32	5.5	9.5	5.4	20	1560	3140	6	515
LMHP30L		30	45	123	74	10	10	51	49	35	6.6	11	6.5	20	2940	5490	6	655

Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

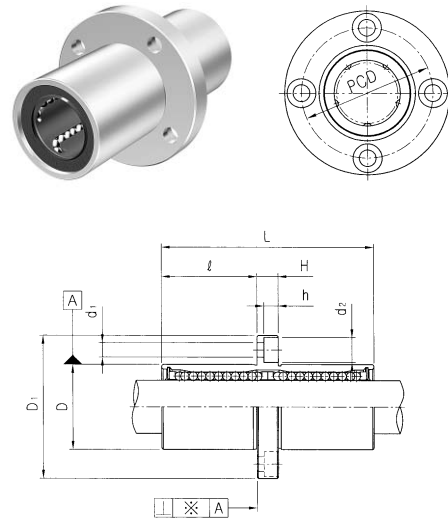
Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≒ 0.102kgf



LMFM FLANGED LINEAR BUSHING LONG



Samick Circular Middle Flanged Linear Bushing		LMFM	20	UU	-	A	N	S
Nominal Shaft Diameter								
Seal		Blank : No Seal U : One Side Seal UU : Both Side Seal						
Retainer		Blank : Resin retainer(Standard) A : Steel retainer(High temperature)						
Outer-sleeves (by corrosion resistance type)		Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment						
Ball type (by corrosion resistance)		Blank : High carbon bearing steel ball (standard) S : Stainless steel ball						

PART NUMBER	WORKING BORE DIAMETER	D	L	D ₁	ℓ	H	PCD	d ₁	d ₂	h	SQUARENESS μm	BASIC LOAD RATING(N)		NO. OF BALLS	WEIGHT (gf)	
												DR. CLEARANCE	mm CLEARANCE			mm CLEARANCE
LMFM6	LMFM6-A	6	12	35	28	15	5	20	3.4	6.5	3.3	15	320	520	4	31
LMFM8	LMFM8-A	8	15	45	32	20	5	24	3.4	6.5	3.3	15	430	780	4	53
LMFM10	LMFM10-A	10	19	55	40	24.5	6	29	4.5	8	4.4	15	580	1100	4	105
LMFM12	LMFM12-A	12	21	57	42	25.5	6	32	4.5	8	4.4	15	650	1200	4	100
LMFM13	LMFM13-A	13	23	61	43	27.5	6	33	4.5	8	4.4	15	810	1570	4	130
LMFM16	LMFM16-A	16	28	70	48	32	6	38	4.5	8	4.4	15	1230	2350	5	187
LMFM20	LMFM20-A	20	32	80	54	36	8	43	5.5	9.5	5.4	20	1400	2750	5	260
LMFM25	LMFM25-A	25	40	112	62	52	8	51	5.5	9.5	5.4	20	1560	3140	6	515
LMFM30		30	45	123	74	56.5	10	60	6.6	11	6.5	20	2490	5490	6	655
LMFM35		35	52	135	82	62.5	10	67	6.6	11	6.5	25	2650	6470	6	970
LMFM40		40	60	154	96	70.5	13	78	9	14	8.6	25	3430	8040	6	1560
LMFM50		50	80	192	116	89.5	13	98	9	14	8.6	25	6080	15900	6	3500
LMFM60		60	90	211	134	96.5	18	112	11	17.5	10.8	30	7650	20000	6	4500



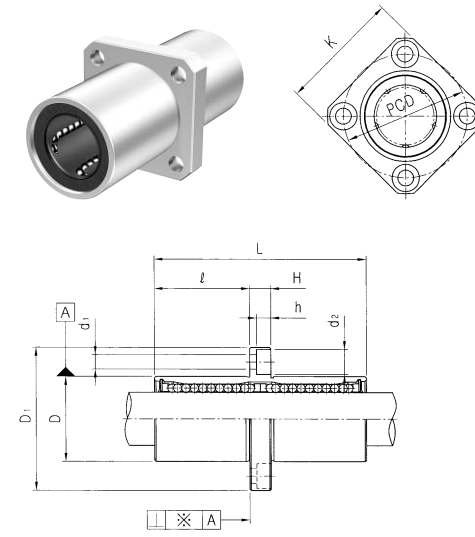
Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≅ 0.102kgf

LMKM FLANGED LINEAR BUSHING LONG



Samick Square Middle MFlanged Linear Bushing		LMKM	20	UU	-	A	N	S
Nominal Shaft Diameter								
Seal		Blank : No Seal U : One Side Seal UU : Both Side Seal						
Retainer		Blank : Resin retainer(Standard) A : Steel retainer(High temperature)						
Outer-sleeves (by corrosion resistance type)		Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment						
Ball type (by corrosion resistance)		Blank : High carbon bearing steel ball (standard) S : Stainless steel ball						

PART NUMBER	WORKING BORE DIAMETER	D	L	D ₁	ℓ	H	PCD	K	d ₁	d ₂	h	SQUARENESS μm	BASIC LOAD RATING(N)		NO. OF BALLS	WEIGHT (gf)	
													DR. CLEARANCE	mm CLEARANCE			mm CLEARANCE
LMKM6	LMKM6-A	6	12	35	28	15	5	20	22	3.4	6.5	3.3	15	320	520	4	31
LMKM8	LMKM8-A	8	15	45	32	20	5	24	25	3.4	6.5	3.3	15	430	780	4	53
LMKM10	LMKM10-A	10	19	55	40	24.5	6	29	30	4.5	8	4.4	15	580	1100	4	105
LMKM12	LMKM12-A	12	21	57	42	25.5	6	32	32	4.5	8	4.4	15	650	1200	4	100
LMKM13	LMKM13-A	13	23	61	43	27.5	6	33	34	4.5	8	4.4	15	810	1570	4	130
LMKM16	LMKM16-A	16	28	70	48	32	6	38	37	4.5	8	4.4	15	1230	2350	5	187
LMKM20	LMKM20-A	20	32	80	54	36	8	43	42	5.5	9.5	5.4	20	1400	2750	5	260
LMKM25	LMKM25-A	25	40	112	62	52	8	51	50	5.5	9.5	5.4	20	1560	3140	6	515
LMKM30		30	45	123	74	56.5	10	60	58	6.6	11	6.5	20	2940	5490	6	655
LMKM35		35	52	135	82	62.5	10	67	64	6.6	11	6.5	25	2650	6470	6	970
LMKM40		40	60	154	96	70.5	13	78	75	9	14	8.6	25	3430	8040	6	1560
LMKM50		50	80	192	116	89.5	13	98	92	9	14	8.6	25	6080	15900	6	3500
LMKM60		60	90	211	134	96.5	18	112	106	11	17.5	10.8	30	7650	20000	6	4500

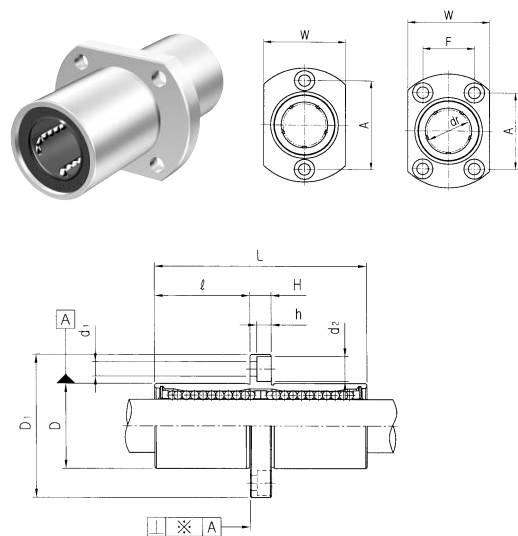
Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≅ 0.102kgf

LMHM FLANGED LINEAR BUSHING



Samick Square Middle Flanged Linear Bushing		LMHM	20	UU	-	A	N	S
Nominal Shaft Diameter								
Seal	Blank : No Seal U : One Side Seal UU : Both Side Seal							
Retainer	Blank : Resin retainer(Standard) A : Steel retainer(High temperature)							
Outer-sleeves (by corrosion resistance type)	Blank : No-plating(Standard) N : Electroless nickel plating R : Raydent treatment							
Ball type (by corrosion resistance)	Blank : High carbon bearing steel ball (standard) S : Stainless steel ball							

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European Standard

PART NUMBER	WORKING BORE DIAMETER	D	L	D ₁	φ	H	W	A	F	d ₁	d ₂	h	SQUARENESS μ(m)	BASIC LOAD RATING(N)		NO. OF WEIGHT		
														DYNAMIC(C)	STATIC(C ₀)	BALL	CIRCUIT (gf)	
Resin	Steel	dr. CLEARANCE	mm CLEARANCE	mm CLEARANCE	mm CLEARANCE													
LMHM6	LMHM6-A	6	12	35	28	15	5	18	20	3.4	6.5	3.3	15	320	520	4	31	
LMHM8	LMHM8-A	8	15	45	32	20	5	21	24	3.4	6.5	3.3	15	430	780	4	53	
LMHM10	LMHM10-A	10	19	55	40	24.5	6	25	29	4.5	8	4.4	15	580	1100	4	105	
LMHM12	LMHM12-A	12	21	57	42	25.5	6	27	32	4.5	8	4.4	15	650	1200	4	100	
LMHM13	LMHM13-A	13	23	61	43	27.5	6	29	33	4.5	8	4.4	15	810	1570	4	130	
LMHM16	LMHM16-A	16	28	70	48	32	6	34	31	22	4.5	8	4.4	15	1230	2350	5	187
LMHM20	LMHM20-A	20	32	80	54	36	8	38	36	24	5.5	9.5	5.4	20	1400	2750	5	260
LMHM25	LMHM25-A	25	40	112	62	52	8	46	40	32	5.5	9.5	5.4	20	1560	3140	6	515
LMHM30		30	45	123	74	56.5	10	51	49	35	6.6	11	6.5	20	2940	5490	6	655

Note 1) Dynamic load rating is based on the nominal life of 50km.
In case of 100km, C on the table need to be divided by 1,26
Ex) LM12's 50km basis dynamic load rating C = 410N
LM12's 100km basis dynamic load rating C₁₀₀ = 410 / 1,26 = 325,40N

Note 2) Based on the weight of resin retainer

Note 3) Dimension : mm

Note 4) 1N ≅ 0.102kgf

