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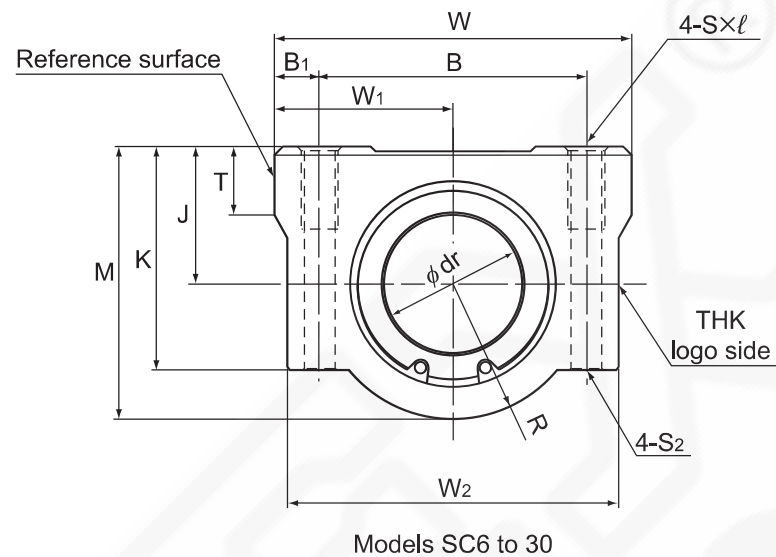
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Models SC6 to 30



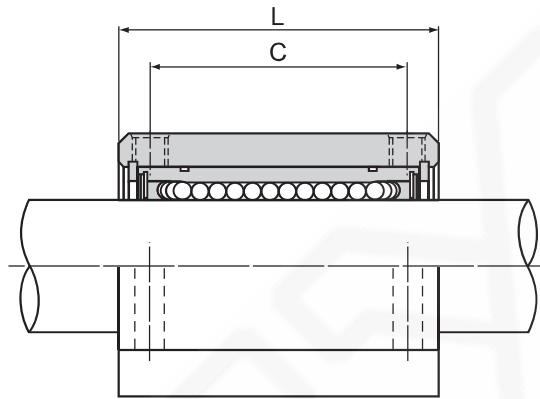
Model No.	Outer dimensions			LM casing dimensions						
	Height	Width	Length	Mounting hole position			Tap	Through bolt	Center height	
	M	W	L	B	B ₁	C	S×ℓ	model No, S ₂	J ±0.02	W ₁ ±0.02
SC 6UU	18	30	25	20	5	15	M4×8	M3	9	15
SC 8UU	22	34	30	24	5	18	M4×8	M3	11	17
SC 10UU	26	40	35	28	6	21	M5×12	M4	13	20
SC 12UU	29	42	36	30.5	5.75	26	M5×12	M4	15	21
SC 13UU	30	44	39	33	5.5	26	M5×12	M4	15	22
SC 16UU	38.5	50	44	36	7	34	M5×12	M4	19	25
SC 20UU	42	54	50	40	7	40	M6×12	M5	21	27
SC 25UU	51.5	76	67	54	11	50	M8×18	M6	26	38
SC 30UU	59.5	78	72	58	10	58	M8×18	M6	30	39

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80°C.

A stainless steel Linear Bushing model LM-MG, which is highly corrosion resistant, can also be incorporated at your request.

Example of Model Number for Use in Combination with
Linear Bushing Units

Linear Bushing to be combined	Example of model No.	
Both end attached with seal	SC 13UU	Standard stock
Without seal	SC 13	Build to order
Made of stainless steel; both end attached with seal	SC 13MUU	Build to order



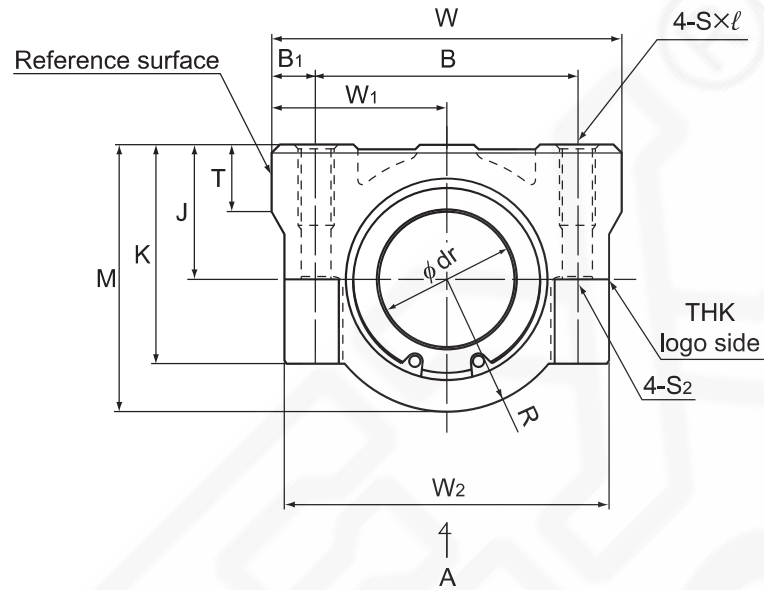
Guide Ball Bushing/Linear Bushing

Unit: mm

							Model No. of Linear Bushing to be combined	Basic load rating		Unit
	K	W ₂	T	R	Inscribed bore diameter			C N	C ₀ N	Mass g
					dr	Tolerance				
	15	28	6	9	6	0 −0.009	LM6UU	206	265	34
	18	32	6	11	8		LM8UU	265	402	52
	22	37	8	13	10		LM10UU	373	549	92
	25	39	8	14	12		LM12UU	412	598	102
	26	41	8	15	13		LM13UU	510	775	123
	35	46	9	19.5	16	0 −0.010	LM16UU	775	1180	189
	36	52	11	21	20		LM20UU	863	1370	237
	41	68	12	25.5	25		LM25UU	980	1570	555
	49	72	15	29.5	30		LM30UU	1570	2750	685

Note) If an oil hole is required, this can be indicated by appending "OH" to the end of the model number.
For further information, contact THK.

Models SC35 to 50



Models SC35 to 50

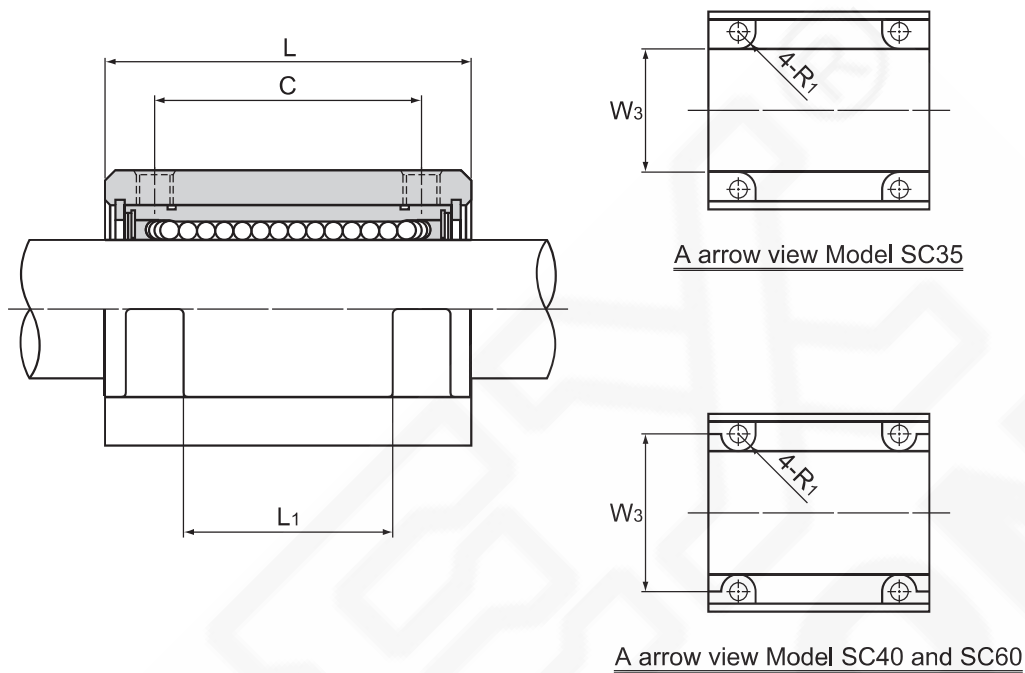
Model No.	Outer dimensions			LM casing dimensions							
	Height	Width	Length	Mounting hole position			Tap	Through bolt	Center height		
	M	W	L	B	B ₁	C	S × l	model No, S ₂	J ±0.02	W ₁ ±0.02	K
SC 35UU	68	90	80	70	10	60	M8 × 18	M6	34	45	54
SC 40UU	78	102	90	80	11	60	M10 × 25	M8	40	51	62
SC 50UU	102	122	110	100	11	80	M10 × 25	M8	52	61	80

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80°C.

A stainless steel Linear Bushing model LM-MG, which is highly corrosion resistant, can also be incorporated at your request.
(Model SC50 does not include a stainless type.)

Example of Model Number for Use in Combination with
Linear Bushing Units

Linear Bushing to be combined	Example of model No.	
Both end attached with seal	SC 40UU	Standard stock
Without seal	SC 40	Build to order
Made of stainless steel; both end attached with seal	SC 40MUU	Build to order

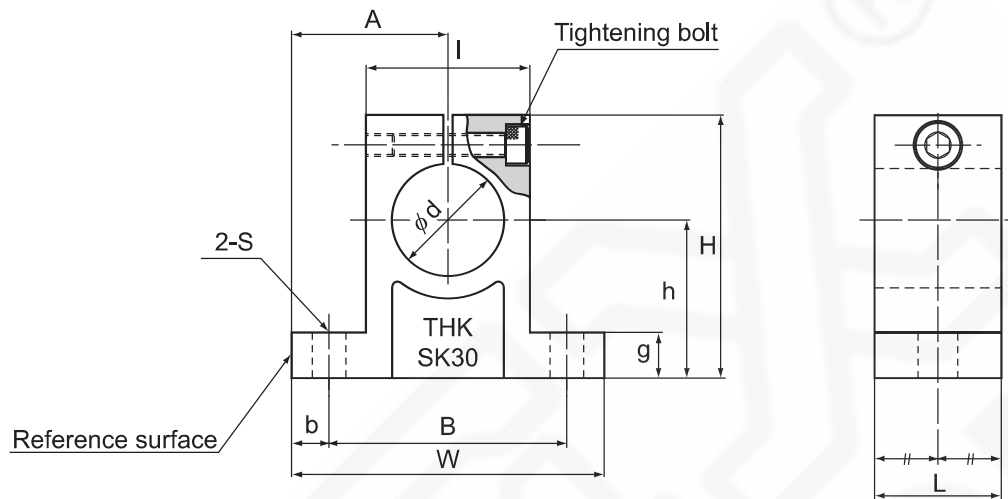


Unit: mm

									Model No. of Linear Bushing to be combined	Basic load rating		Unit
	W ₂	W ₃	L ₁	T	R	R ₁	Inscribed bore diameter			C	C ₀	Mass g
							dr	Tolerance				
	85	60	42	18	34	5	35	0 -0.012	LM35UU	1670	3140	1100
	96	80	44	20	38	8	40		LM40UU	2160	4020	1600
	116	100	64	25	50	8	50		LM50UU	3820	7940	3350

Note) If an oil hole is required, this can be indicated by appending "OH" to the end of the model number.
For further information, contact THK.

Model SK



Unit: mm

Model No.	Main dimensions													Mass g
	H	W	L	B	S	Mounting bolt model No.	h ± 0.02	A ± 0.05	b	g	I	Shaft diameter d	Tightening bolt model No.	
SK 10	32.8	42	14	32	5.5	M5	20	21	5	6	18	10	M4	24
SK 12	37.5	42	14	32	5.5	M5	23	21	5	6	20	12	M4	30
SK 13	37.5	42	14	32	5.5	M5	23	21	5	6	20	13	M4	30
SK 16	44	48	16	38	5.5	M5	27	24	5	8	25	16	M4	40
SK 20	51	60	20	45	6.6	M6	31	30	7.5	10	30	20	M5	70
SK 25	60	70	24	56	6.6	M6	35	35	7	12	38	25	M6	130
SK 30	70	84	28	64	9	M8	42	42	10	12	44	30	M6	180
SK 35	83	98	32	74	11	M10	50	49	12	15	50	35	M8	270
SK 40	96	114	36	90	11	M10	60	57	12	15	60	40	M8	420

Standard LM Shafts

THK manufactures high quality, dedicated LM shafts for linear bushings.

(1) [Major materials]

SUJ2 (high-carbon chromium bearing steel)

THK5SP (THK standard material)

SUS440C equivalent

[Hardness] 58 to 64 HRC (SUJ2, THK5SP), 56 HRC or above (SUS440C or equivalent)

[Hardened layer depth] 0.8 to 2.5 mm (varies with shaft diameter)

[Surface roughness] Ra 0.4 or less

[Straightness of the LM shaft] 50 μ m/300 mm or less

(2) Precision-grade LM shafts with shaft diameter tolerance of g5 or h5 are also manufactured as standard.



Unit: mm

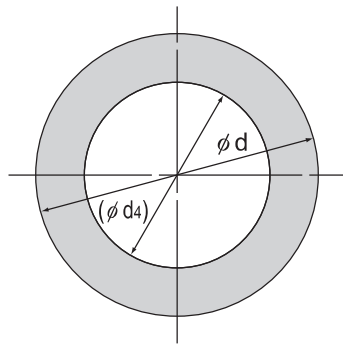
Model No.	Shaft diameter		Manufactured length L	
	d	Tolerance g6 μ m	Min length	Max length
SF 3	3	-2 -8	20	400
SF 4	4	-4 -12	20	400
SF 5	5		20	500
SF 6	6		20	1500
SF 8	8	-5 -14	20	1500
SF 10	10		30	1500
SF 12	12		30	1500
SF 13	13	-6 -17	30	1500
SF 16	16		40	3000
SF 20	20		40	3000
SF 25	25	-7 -20	50	3000
SF 30	30		60	3000
SF 35	35		70	3000
SF 38*	38	-9 -25	100	3000
SF 40	40		100	3000
SF 50	50		100	3000
SF 60*	60	-10 -29	200	3000
SF 80*	80		200	3000
SF 100*	100		200	3000

Note)*Made to order

[Dimensions of Hollow LM Shafts]

If a hollow LM shaft is required for purposes such as weight reduction, use the desired material from Table1 for the dimensions of hollow LM shafts that THK keeps in stock.

Table1 Dimensions of Hollow LM Shafts Unit: mm



Supported model numbers	LM shaft outer diameter d	Inner diameter (φd ₄)	Mass (kg/m)	
			Solid shaft	Hollow shaft
LM 8	8	3	0.4	0.34
LM 10	10	4	0.62	0.52
LM 12	12	6	0.89	0.67
LM 13	13	7	1.05	0.75
LM 16	16	9	1.59	1.09
LM 20	20	10	2.47	1.86
LM 20	20	14	2.47	1.26
LM 25	25	15	3.86	2.47
LM 30	30	16	5.56	3.98
LM 35	35	20	7.57	5.1
* LM 38	38	22	8.92	5.93
LM 40	40	22	9.88	6.89
LM 50	50	25	15.5	11.6
LM 60	60	32	22.3	16.0
* LM 80	80	52.5	39.6	22.5
* LM 100	100	67.5	61.8	33.7

Models marked with “*” are build-to-order items.

Model number coding

SF25 g6 -500L K

Model number

LM shaft outer diameter tolerance

Overall LM shaft length (in mm)

Special symbol*

no symbol: solid shaft K: standard hollow shaft

M: special material F: with surface treatment

*If two or more symbols are given, they are shown in an alphabetical order.

Specially Machined Types

THK also supports special machining processes such as tapping, milling, threading, through hole and end journals, as shown in the Fig.1, at your request.

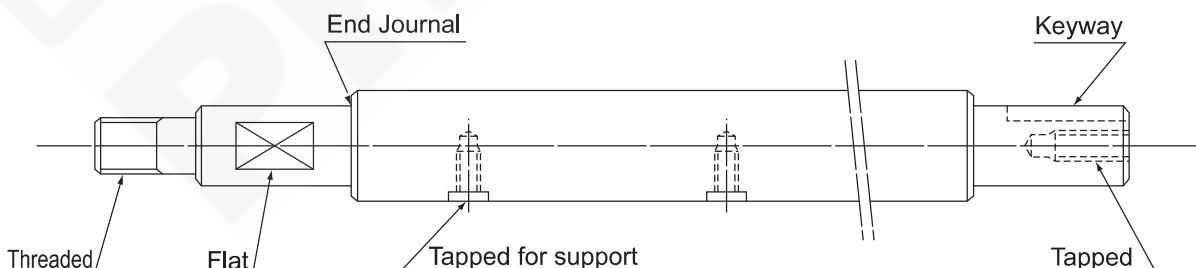


Fig.1

Dedicated Shafts

As the dedicated shafts for linear bushings come into direct contact with the ball bearings, the manufacturing tolerances for hardness, surface roughness, and the dimensional precision of the shaft are tight.

When manufacturing dedicated shafts, the surface hardness of the shaft will have a large impact on the overall service life. Check the following material and heat treatment specifications.

[Material]

Generally, the following materials are used for surface hardening through induction-hardening.

- SUJ2 (JIS G 4805: high-carbon chromium bearing steel)
- SK3 to 6 (JIS G 4401: carbon tool steel)
- S55C (JIS G 4051: carbon steel for machine structural use)

For special applications, martensite stainless steel SUS440C, which is corrosion resistant, may also be used.

[Hardness]

We recommend surface hardness of 58 HRC ($\approx$ 653 HV) or higher. The depth of the hardened layer is determined by the size of the Linear Bushing; we recommend approximately 2 mm for general use.

[Surface Roughness]

To achieve smooth motion, the surface should preferably be finished to Ra0.40 or less.

Table of Rows of Balls and Masses for Clearance-adjustable Types and Open Types of the Linear Bushing

Shaft diameter	Clearance-adjustable Type			Open Type		
	Model No.	Rows of balls	Mass g	Model No.	Rows of balls	Mass g
6	LM 6-AJ	4	7.8	—	—	—
8	LM 8S-AJ	4	10	—	—	—
	LM 8-AJ	4	14.7	—	—	—
10	LM 10-AJ	4	29	—	—	—
12	LM 12-AJ	4	31	—	—	—
13	LM 13-AJ	4	42	LM 13-OP	3	34
16	LM 16-AJ	5(4)	68	LM 16-OP	4(3)	52
20	LM 20-AJ	5	85	LM 20-OP	4	69
25	LM 25-AJ	6(5)	216	LM 25-OP	5(4)	188
30	LM 30-AJ	6	245	LM 30-OP	5	210
35	LM 35-AJ	6	384	LM 35-OP	5	350
38	LM 38-AJ	6	475	LM 38-OP	5	400
40	LM 40-AJ	6	579	LM 40-OP	5	500
50	LM 50-AJ	6	1560	LM 50-OP	5	1340
60	LM 60-AJ	6	1820	LM 60-OP	5	1650
80	LM 80-AJ	6	4320	LM 80-OP	5	3750
100	LM 100-AJ	6	8540	LM 100-OP	5	7200
120	LM 120-AJ	8	14900	LM 120-OP	6	11600

Note) The numbers of ball rows in the table apply to types using a resin retainer. Those of types using a metal retainer are indicated in parentheses.