

# Shaft-Sliding Linear Bushings (With Pillow Blocks)

Single / Double Type

Shaft-Sliding Linear Bushings (With Pillow Blocks) – Single Type

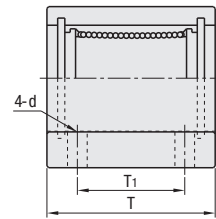
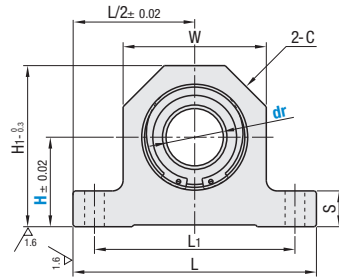


Shaft-Sliding Linear Bushings (With Pillow Blocks) – Double Type



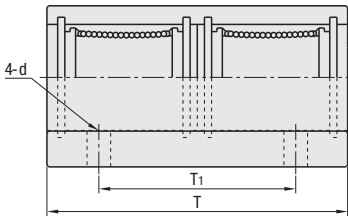
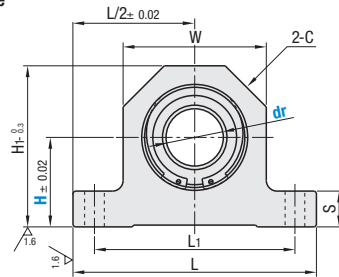
Type		Linear Bushing (P.375)	Housing		Ambient Operating Temperature
Single	Double		Material	Surface Treatment	
LHGS	LHW	LMU	Aluminum Alloy	Clear Anodize	-20~80°C

Single



6.3/(1.6/)  
(Housing)

Double



For ball row details see P.379. The datum surface is located on the other side of product ID label.

Part Number	Type	dr	H				L	H <sub>1</sub>	T		T <sub>1</sub>		S	W	C	C <sub>1</sub>	L <sub>1</sub>	d
			12	15	20	25			Single	Double	Single	Double						
Single LHGS	12	15	20	25	30	58	H+15	40	70	25	50	8	30	8.5	0.5	46	5.5	
			16	20	25	30	68	H+20	47	84	30	55	10	40		11.5	56	5.5
			20	25	30	72	H+22	52	94	35	60	12	44	12.5		60	5.5	
Double LHGW	25	30	40	50	60	90	H+27.5	69	128	50	90	15	55	16	0.5	75	6.6	
			25	30	40	105	H+32.5	74	138	55	100	20	65	18		85	9	
			30	40	50	105	H+32.5	74	138	55	100	20	65	18		85	9	

For Precautions for Use, see P.369. The datum surface is located on the other side of product ID label. For linear bushings, hardened shafts with g6 tolerance are recommended. P.202-288

dr	Basic Load Rating				Allowable Static Moment (N-m)		Mass(g)	
	C (Dynamic) N		Co (Static) N		Single	Double	Single	Double
	Single	Double	Single	Double				
12	412	657	598	1200	—	10.9	41	80
16	775	1230	1180	2350	—	19.7	73	145
20	882	1400	1370	2740	—	26.8	98	180
25	980	1560	1570	3140	—	43.4	236	440
30	1570	2490	2740	5490	—	82.8	262	480

## Features of Shaft-Sliding Linear Bushings with Pillow Blocks

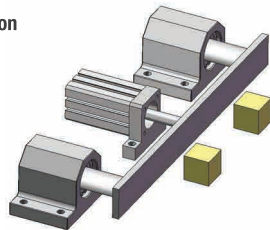
- As the height is selectable, there is no need to use Height Adjusting Spacers.
- As Spacers are not required, parts count and cost can be reduced.
- Can be easily screw mounted from above, suitable for shaft-sliding mechanisms.
- Compact specifications for space saving.

Part Number Example	Part Number	H
LHGS16	- 30	
LHW20	- 25	
LHGS12L	- 15 (L Type Greased)	
LHW30G	- 30 (G Type Greased)	
LHW20H	- 25 (H Type Greased)	

Alternative grease types available.

## Application Example

Guide of cylinders for moving work piece.



# Linear Bushings (Tall Block with Dowel Holes)

Single / Double / Long Type

Linear Bushings (Tall Block with Dowel Holes) – Single Type



Linear Bushings (Tall Block with Dowel Holes) – Double Type

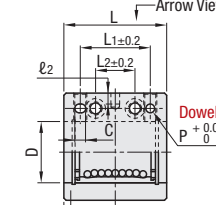
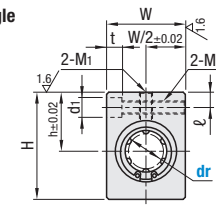


Linear Bushings (Tall Block with Dowel Holes) – Long Type

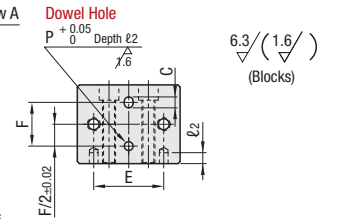


Type	Linear Bushings (P.375)	Housing Material	Surface Treatment	Ambient Operating Temp.
Single	LMU	Aluminum Alloy	Clear Anodize	-20~80°C

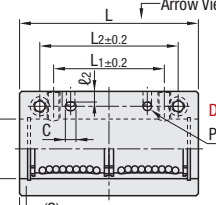
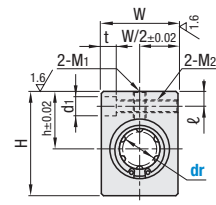
Single



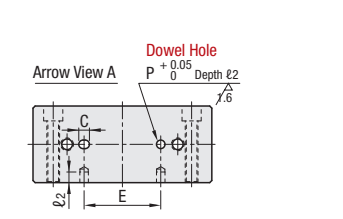
Arrow View A



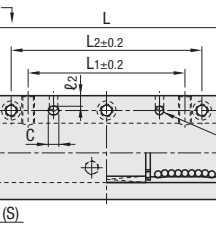
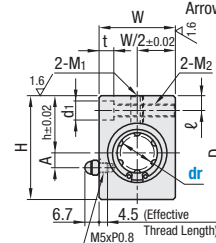
Double



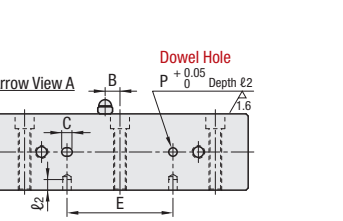
Arrow View A



Long



Arrow View A



Overall length is approximately 2 times of single type and allowable moment is approximately 6 times. Overall length is approximately 2.5 times of single type and allowable moment is approximately 21 times.

Position of dowel holes for Double Type and Long Type is ± 0.02 from the center of dr.

Type	Part Number	dr	Tolerance			D	(S)	L			L <sub>1</sub>			L <sub>2</sub>			h	W	H	ℓ	A	B	M <sub>1</sub> (Effective Length)	M <sub>2</sub> (Effective Length)	d <sub>1</sub> x t	C
			Single	Double	Long			Single	Double	Long	Single	Double	Long	Single	Double	Long										
LHSSN LHSSWN LHSSLN	8	0	0	—	15	3.0	32	56	—	20	30	—	10	42	—	16	20	26	5	—	—	M5 (8.5)	M4 (15)	6 x 5 (For M3 Screws)	1	
	10	0	0	—	19	4.0	39	68	—	27	36	—	15	50	—	19	26	32	6	—	—	M6 (9.5)	M5 (20)	8 x 6 (For M4 Screws)		
	12	-0.009	-0.010	—	21	4.0	40	70	—	28	42	—	16	55	—	20	28	34	7	—	—	M6 (13)	M5 (22)	9 x 7 (For M5 Bolt)		
	13	0	0	—	23	3.8	42	74	—	28	42	—	16	55	—	25	30	43	7	7	7	M6 (13)	M6 (29)	9 x 7 (For M5 Bolt)		
	(16)	0	-0.015	—	28	3.8	47	84	121	32	52	74	—	65	90	27	36	49	7	7	7	M6 (13)	M6 (29)	9 x 7 (For M5 Bolt)		
	(20)	0	0	0	32	3.8	52	94	136	36	58	82	—	70	102	31	42	54	8	—	—	M8 (15)	M8 (34)	11 x 8 (For M6 Screws)		
	(25)	-0.010	-0.012	-0.018	40	3.2	69	128	187	42	80	116	—	100	140	37	52	65	9	—	—	M10 (17)	M10 (42)	14 x 10 (For M8 Screws)		
	(30)	0	-0.012	-0.018	45	3.2	74	138	202	44	90	128	—	110	152	40	58	71	9	—	—	M10 (17.5)	M10 (48)	14 x 10 (For M8 Screws)		

For Precautions for Use, see P.369. Position of dowel holes for Double Type and Long Type is ± 0.02 from the center of dr. Long Type is available in dr dimensions in ( ) only. Inner surfaces of dowel holes are not anodized. Make certain that the screws do not interfere with the bushing as M, are through holes. The datum surface is located on the other side of product ID label. Dowel Pins MS and MSC on P.2449 are recommended.

dr	Dowel Hole Dimensions						Basic Load Rating						Allowable Static Moment (N-m)			Mass(g)													
	P	C	ℓ <sub>2</sub>	E			F	C (Dynamic) N			Co (Static) N			Single	Double	Long	Single	Double	Long										
				Single	Double	Long		Single	Double	Long	Single	Double	Long																
8	2.5	3.5	3	22	16	—	12	265	431	—	380	784	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
10	4	5	5	29	20	—	16	372	588	—	549	1100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
12				—	18	412	657	—	598	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
13				30	26	—	—	—	20	510	813	—	784	1570	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16				32	36	50	—	—	20	775	1230	1230	1180	2350	2350	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20	5	6	6	36	38	60	—	882	1400	1400	1370	2740	2740	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
25				42	58	90	26	980	1560	1560	1570	3140	3140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
30				44	68	100	30	1570	2490	2490	2740	5490	5490	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Part Number Example	Part Number	H
LHSSN16	- 30	
LHSSN20L	- 15 (L Type Greased)	
LHSSN16G	- 30 (G Type Greased)	
LHSSN20H	- 25 (H Type Greased)	

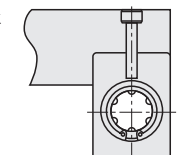
Alternative grease types available.

## Features of Dowel Hole Type

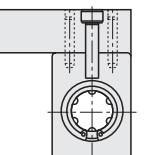
- By the dowel holes provided on the mounting interface surface, locating work using the side datum can be eliminated. (See example on right)
- Machining work can be reduced for the top plate to be mounted on the block.

## Installation Example

Conventional Type



Dowel Hole Type



Locating with a shoulder as the datum

Locating with dowel holes and pins

kgf=Nx0.101972