Linear Bushings (Wide Block with Dowel Holes)

Single / Double / Long Type

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

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

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

RoHS10

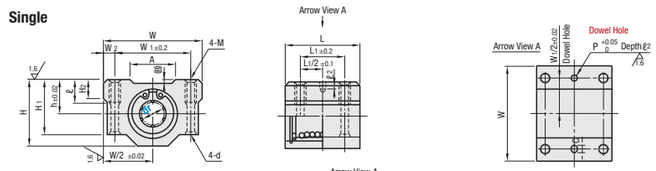
Type			Linear Bushings (P.375)	Housing		Ambient Operating Temp.
Single	Double	Long		Material	Surface Treatment	
LHBBN	LHBBWN	LHBBLN	LMU	Aluminum Alloy	Clear Anodize	-20–80°C

Features of Double Type
Body length is approximately two times of single type and allowable moment is approximately six times.

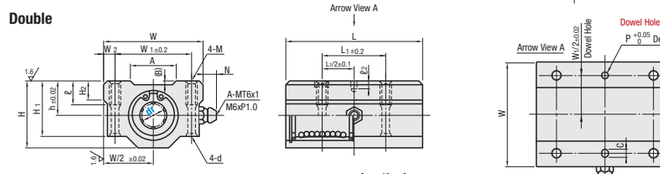
Features of Long Type
Body length is approximately 2.5 times of single type. Allowable moment is approximately 21 times.

6.3 (1.6) (Housing)

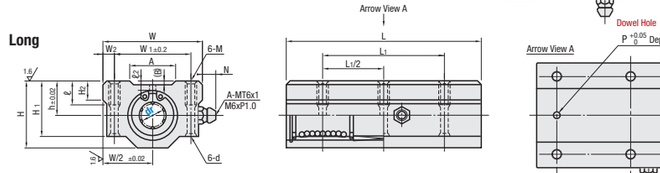
Single



Double



Long



ⓘ Inner surfaces of dowel holes are not anodized.
ⓘ For ball row details see **P.375**.
ⓘ The datum surface is located on the other side of product ID label.
ⓘ Dowel Pins MS / MSC shown **P.2449** are recommended.

ⓘ Position of dowel hole for long type is ±0.02 to center of dr.

dr	Tolerance			L			L_1			h	H	(H_1)	(H_2)	W	W_1	W_2	M	d	ℓ	(A)	(B)	N	G	C
	Single	Double	Long	Single	Double	Long	Single	Double	Long															
10	0 -0.009	0 -0.010	—	35	68	—	21	46	—	13	26	21	8	40	28	6	M5	4.3	12	15.5	0.4	7.5	—	5
12				36	70		26	50		15	28	24		42	30.5	5.75				17.5		7		4
13				39	75						30	24.5		44	33	5.5				19	0.85			5.5
(16)			0 -0.015	44	85	118	34	60	88	19	38.5	32.5	9	50	36	7				19.8		6.5	7	6
(20)	0 -0.010	0 -0.012	0 -0.018	50	96	134	40	70	100	21	41	35	11	54	40		M6	5.2		21	0.5	7.5	8	6
(25)				67	130	185	50	100	138	26	51.5	42	12	76	54	11	M8	7	18	36	1	4.5	9	9.5
(30)				72	140	200	58	110	150	30	59.5	49	15	78	58	10				39.9	0.75	5.5		9.5
(35)	0 -0.012	0 -0.015	0 -0.021	80	155	220	60	120	170	34	68	54	18	90	70					53	1.5	6	10	14
(40)				90	175	250	60	140	190	40	78	62	20	102	80	11	M10	8.7	25	61		5.5	12	16
(50)				110	215	310	80	160	230	52	102	80	25	122	100					81				22

ⓘ For Precautions for Use, see **P.369**. ⓘ Position of dowel hole for long type is ± 0.02 to 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_1 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 Dim.				Basic Load Rating						Allowable Static Moment (N-m)			Mass(g)		
	P	l_2	C	E	C (Dynamic) N			Co (Static) N								
					Single	Double	Long	Single	Double	Long	Single	Double	Long	Single	Double	Long
10	4	5	5	—	372	588	—	549	1100	—	—	7.24	27.0	92	180	—
12				—	412	657	—	598	1200	—	—	10.9	40.1	102	205	—
13				—	510	813	—	784	1570	—	—	11.6	42.9	120	240	—
16				88	775	1230	1230	1180	2350	2350	—	19.7	73.5	220	400	527
20	5	(5) 6	6	100	882	1400	1400	1370	2740	2740	—	26.8	98.0	255	570	682
25				138	980	1560	1560	1570	3140	3140	—	43.4	157	600	1200	1586
30				150	1570	2490	2490	2740	5490	5490	—	82.8	297	735	1480	1960
35				170	1670	2650	2650	3140	6270	6270	—	110	373	1100	2200	2974
40	6	7	7	190	2160	3430	3430	4020	8040	8040	—	147	553	1590	3200	4285
50				230	3820	6080	6080	7940	15900	15900	—	397	—	3340	6700	8620

ⓘ l_2 of LHBBLN20 is 5.

kgf=Nx0.101972

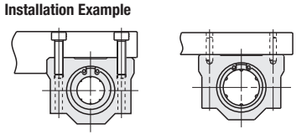
Part Number Example

Part Number
LHBBN10
LHBBWN20
LHBBWN20L (L Type Greased)
LHBBWN20G (G Type Greased)
LHBBWN20H (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 left)
– Machining work can be reduced for the top plate to be mounted on the block.

Installation Example



Locating with plate end datum

Locating with dowel holes

Linear Bushings (Wide Block with Pillow Blocks)

Single / Medium Type

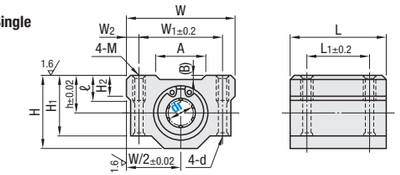
Linear Bushings (Wide Block with Pillow Blocks) – Single Type

Linear Bushings (Wide Block with Pillow Blocks) – Medium Type

RoHS10

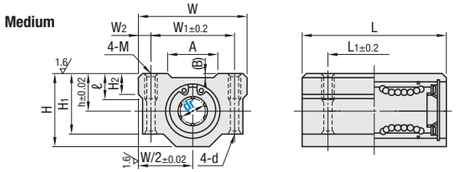
Type		Linear Bushings		Housing		Ambient Operating Temperature
Single Type	Medium Type	(P.375)	(P.377)	Material	Surface Treatment	
		Single	Medium			
LHBB	LHBBD	LMU	LMUD	Aluminum Alloy	Clear Anodize	-20–80°C
LHBBF	—	LMUF	—			-20–110°C
SLHBB	—	SLMU	—			-20–80°C
SLHBBF	—	SLMUS	—			-20–110°C

Single



6.3 (1.6) (Housing)

Medium



Features of Medium Type Bushings
Body length is approximately 1.4 times of single type and allowable moment is approximately 4.3 times, suitable where there is not enough space for double type.

ⓘ For ball row details, see **P.375, 377**.
ⓘ The datum surface is located on the other side of product ID label.

dr	Tolerance		L		L_1		h	H	H_1	H_2	W	W_1	W_2	M	d	ℓ	A	(B)	C
	Single	Middle	Single	Middle	Single	Middle													
(5)	0 -0.008	—	18	—	12	—	7	14	11	—	22	16	3	M3	—	—	—	—	0.5 or less
6	0 -0.009	0 -0.010	25	35	15	24	9	18	15	6	30	20	5	M4	3.4	8	12	0.4	1 or less
8			30	43	18	28	11	22	18		34	24					16		
10			35	53	21	34	13	26	21	8	40	28	6	M5	4.3	12	15.5		
12			36		26	38	15	28	24		42	30.5	5.75				17.5		1.5 or less
13			39	54				30	24.5		44	33	5.5				19	0.85	
16			44	63	34	48	19	38.5	32.5	9	50	36	7				19.8		
20	0 -0.010	0 -0.012	50	73	40	56	21	41	35	11	54	40		M6	5.2		21	0.5	
25			67	93	50	66	26	51.5	42	12	76	54	11	M8	7	18	36	1	
30			72	100	58	70	30	59.5	49	15	78	58	10				39.9	0.75	
(35)	0 -0.012	—	80	—	60	—	34	68	54	18	90	70					53	1.5	
(40)			90		60		40	78	62	20	102	80	11	M10	8.7	25	61		2 or less
(50)			110		80		52	102	80	25	122	100					81		

ⓘ For Precautions for Use, see **P.369**. ⓘ For linear bushings, hardened shafts with g6 tolerance are recommended. **P.202–288**
ⓘ dr5 appearance will be different from the drawings above. ⓘ dr ( ) are available for Single Type only. ⓘ The datum surface is located on the other side of product ID label.

kgf=Nx0.101972

dr	Basic Load Rating				Allowable Static Moment (N-m)		Mass(g)	
	C (Dynamic) N		Co (Static) N					
	Single	Medium	Single	Medium	Single	Medium	Single	Medium
5	167	—	206	—	—	—	14	—
6	206	226	265	310	—	1.42	34	48
8	265	310	380	452	—	2.12	52	78
10	372	508	549	718	—	4.37	92	142
12	412	634	598	814	—	6.2	102	144
13	510	640	784	826	—	6.2	120	172
16	775	1164	1180	1448	—	13.1	220	323
20	882	1554	1370	2068	—	18.3	255	382
25	980	1725	1570	3068	—	25.3	600	866
30	1570	2440	2740	3974	—	42.7	735	1061
35	1670	—	3140	—	—	—	1100	—
40	2160	—	4020	—	—	—	1590	—
50	3820	—	7940	—	—	—	3340	—

Part Number Example

Part Number
LHBB12
LHBBD16
LHBB12L (L Type Greased)
LHBBD16G (G Type Greased)
LHBBD20H (H Type Greased)

ⓘ Alternative grease types available.