

Linear Bushings

Single

= For customers using industry standard products =
 The part enclosed in the red frame is as per industry standard specifications (Outer cylinder EN 1.3505 Equiv. equivalent, Retainer resin).
 Consider these specifications while selecting the product.

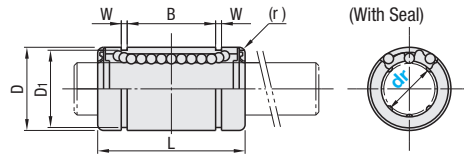
Features: The most popular Linear Bushing style.

Industry Standard



RoHS 10

Type	Outer Cylinder			Balls	Retainer	Ambient Operating Temp.	Accessory			
	Material	Hardness	Surface Treatment	Material	Material					
LMU-N	EN 1.3505 Equiv.	58HRC~	-	EN 1.3505 Equiv.	Plastic (Duracon M90 Equiv.)	-20~ 80°C	Seal Material Nitrile Rubber (-20~120°C)			
LMU					Stainless Steel (Stainless Steel)	-20~110°C				
LMUF-N					EN 1.4125 Equiv.	56HRC~		-	Plastic (Duracon M90 Equiv.)	-20~ 80°C
LMUF									Stainless Steel (Stainless Steel)	-20~110°C
LMUR									Plastic (Duracon M90 Equiv.)	-20~ 80°C
LMUM									Stainless Steel (Stainless Steel)	-20~ 80°C
LMUMF	Plastic (Duracon M90 Equiv.)	-20~ 80°C								
SLMU	Stainless Steel (Stainless Steel)	-20~120°C								



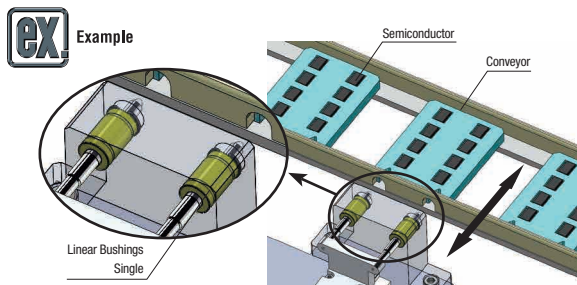
Part Number	Type	dr	D Tolerance		L Tolerance	B Tolerance	W	D1	(r)	Eccentricity (Max.)	Rows of Balls	Basic Load Rating		Mass (g)
			dr	Tolerance								C (Dynamic) N	Co (Static) N	
LMU-N (No Seal)	3	0	7	0	10	-	-	0.3	0.008	4	69	105	1.4	
			8	-0.009	12	-	88				127	2.0		
LMU	4	-0.008	10	-0.015	15	8	9.6	0.4	0.012	5	167	206	4.0	
			12	0	19	11.3	206				265	8.5		
LMUF-N (No Seal)	6	0	15	-0.011	24	15.3	14.3	0.8	0.015	6	265	380	17	
			19	0	29	19.4	372				549	31		
LMUF	10	-0.009	21	0	30	20	20	0.015	0.020	7	412	598	41	
			23	-0.013	32	20.4	510				784	46		
LMUR	12	0	28	0	37	23.3	27	0.020	0.025	8	775	1180	73	
			32	-0.016	42	27.3	882				1370	98		
LMUM	16	0	40	0	42	37.3	30.5	0.020	0.030	9	980	1570	236	
			45	-0.025	59	40.8	1570				2740	262		
LMUMF	20	-0.010	64	0	64	45.3	43	0.020	0.040	10	1570	2740	262	
			70	-0.030	80	56.3	2160				4020	654		
SLMU	30	0	80	0	100	68.8	76.5	0.020	0.050	11	3820	7940	1700	
			80	-0.030	100	68.8	3820				7940	1700		

kgf=Nx0.101972

- For Precautions for Use, see P.303.
- For LMU-N and LMUF-N, dr=3/4.
- Products with dr=3, 4 are without seal. No-Seal Type has lower sliding resistance (0.4~1.2N). Separate dust-proofing measures are necessary to keep the dust entering into sliding parts.
- For LTBC Plating, see P.304.
- Spacers and Stoppers for linear bushings can be selected from P.330.

dr	Unit Price									
	LMU-N	LMU	LMUF-N	LMUF	LMUR	LMUM	LMUMF	SLMU	SLMUS	
3	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-

- Ordering Example
- Part Number
- LMU20 (No Seal)
 - LMU-N20 (LTBC Plating)
 - LMUR20 (L Type Greased)
 - LMUR20L (G Type Greased)
 - LMUR20H (H Type Greased)
- Alternative grease types available.
 For Days to Ship, Price and Performance, see P.304.



▲ Semiconductor conveyor tray locating mechanism

Linear Bushings

Double

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 Consider these specifications while selecting the product.

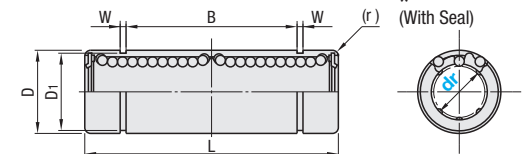
Features: Most common specification in Linear Bushings. Use Double Type in case moment load is to be applied.

Industry Standard



RoHS 10

Type	Outer Cylinder			Balls	Retainer	Ambient Operating Temp.	Accessory			
	Material	Hardness	Surface Treatment	Material	Material					
LMUW-N	EN 1.3505 Equiv.	58HRC~	-	EN 1.3505 Equiv.	Plastic (Duracon M90 Equiv.)	-20~ 80°C	Seal Material Nitrile Rubber (-20~120°C)			
LMUW					Stainless Steel (Stainless Steel)	-20~110°C				
LMUWF					EN 1.4125 Equiv.	56HRC~		-	Plastic (Duracon M90 Equiv.)	-20~ 80°C
LMUWR									Stainless Steel (Stainless Steel)	-20~110°C
LMUWM									Plastic (Duracon M90 Equiv.)	-20~ 80°C
LMUWMF									Stainless Steel (Stainless Steel)	-20~ 80°C
SLMUW	Plastic (Duracon M90 Equiv.)	-20~ 80°C								
SLMUWS	Stainless Steel (Stainless Steel)	-20~120°C								



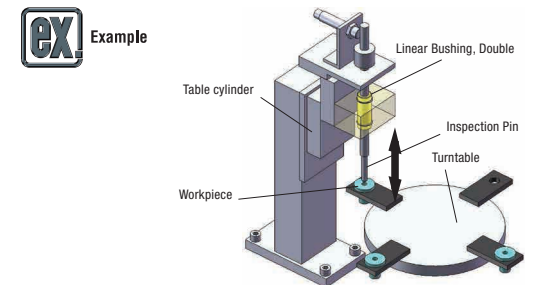
Part Number	Type	dr	D Tolerance		L Tolerance	B Tolerance	W	D1	(r)	Eccentricity (Max.)	Rows of Balls	Basic Load Rating		Allowable Static Moment (N·m)	Mass (g)
			dr	Tolerance								C (Dynamic) N	Co (Static) N		
LMUW-N (No Seal)	3	0	7	0	19	-	-	0.3	0.010	4	138	210	0.51	3.2	
			8	-0.011	23	-	176				254	0.63	4.8		
LMUW	4	-0.010	10	-0.015	28	18.2	9.6	0.4	0.015	5	263	412	1.38	11	
			12	0	35	24.8	11.5				324	529	2.18	16	
LMUWF	6	0	15	-0.013	45	32.8	14.3	0.8	0.020	6	431	784	4.31	31	
			19	0	55	41.4	18				588	1100	7.24	62	
LMUWR	12	0	21	0	57	43.4	20	0.020	0.025	7	657	1200	10.9	80	
			23	-0.016	61	49.8	22				813	1570	11.6	90	
LMUWM	16	0	28	0	70	57.8	27	0.025	0.030	8	1230	2350	19.7	145	
			32	-0.019	80	68.3	30.5				1400	2740	26.8	180	
LMUWMF	20	-0.012	40	0	112	78.3	38	0.030	0.040	9	1560	3140	43.4	440	
			45	-0.025	123	85.3	43				2490	5490	82.8	480	
SLMUW	35	0	52	0	135	94.8	49	0.040	0.050	10	2650	6270	110	795	
			60	-0.022	151	116.8	57				3430	8040	147	1170	
SLMUWS	40	-0.015	80	-0.030	192	142.8	76.5	0.050	0.060	11	6080	15900	397	3100	
			80	-0.030	192	142.8	76.5				6080	15900	397	3100	

kgf=Nx0.101972

- For Precautions for Use, see P.303.
- dr=3, 4 are not available for LMUW-N and LMUWR.
- Products with dr=3, 4 are without seal. No-Seal Type has lower sliding resistance (0.4~1.2N). Separate dust-proofing measures are necessary to keep the dust entering into sliding parts.
- For LTBC Plating, see P.304.
- Spacers and Stoppers for linear bushings can be selected from P.330.

dr	Unit Price									
	LMUW-N	LMUW	LMUWF	LMUWR	LMUWM	LMUWMF	SLMUW	SLMUWS		
3	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-

- Ordering Example
- Part Number
- LMUW20 (No Seal)
 - LMUW-N20 (LTBC Plating)
 - LMUWR20 (L Type Greased)
 - LMUWR20L (G Type Greased)
 - LMUWR20H (H Type Greased)
- Alternative grease types available.
 For Days to Ship, Price and Performance, see P.304.



▲ Inspection instrument to confirm the precision of work piece hole