

Linear Bushings

Single

= For customers using industry standard products =
 The part enclosed in the red frame is as per industry standard specifications (Outer cylinder SUJ2 equivalent, Retainer resin).
 Consider these specifications while selecting the product.

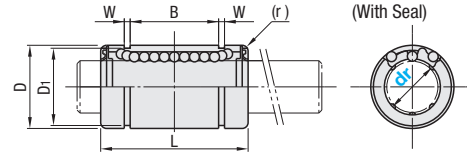
Features: The most popular Linear Bushing style.

Industry Standard



RoHS 10

Type	Outer Cylinder			Balls	Retainer Material	Ambient Operating Temp.	Accessory		
	Material	Hardness	Surface Treatment						
LMU-N	SUJ2 Equivalent	58HRC~	-	SUJ2 Equivalent	Plastic (Duracon M90 Equivalent)	-20~ 80°C	Seal Material Nitrile Rubber (-20~120°C)		
LMU					Stainless Steel (SUS)	-20~110°C			
LMUF-N					SUS440C Equivalent	-		Plastic (Duracon M90 Equivalent)	-20~ 80°C
LMUR								Stainless Steel (SUS)	-20~110°C
LMUM								Plastic (Duracon M90 Equivalent)	-20~ 80°C
LMUMF	SUS440C Equivalent	56HRC~	-	Stainless Steel (SUS)	-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)	
			No Surface Treatment	Surface Treatment								C (Dynamic) N	Co (Static) N		
LMU-N (No Seal)	3	0	-0.008	7	0	0	-	-	0.3	0.008	4	69	105	1.4	
				8	-0.009							-	88	127	2.0
				10	-0.015							8	167	206	4.0
				12	0							11.3	206	265	8.5
				15	-0.011							-0.018	24	265	17
LMUF-N (No Seal)	6	0	-	19	0	0	-	0.4	0.012	4	372	549	31		
				20	-0.011						-0.018	15.3	412	598	41
				24	0						20.4	19.4	510	784	46
				29	-0.013						-0.021	20	775	1180	73
				30	0						27.3	20.4	882	1370	98
LMUF	10	-0.009	-	29	0	0	-0.4	0.8	0.015	5	980	1570	236		
				30	-0.013						-0.021	18	1570	2740	262
				32	0						30.5	18	1670	3140	425
				40	-0.016						-0.025	20	2160	4020	654
				45	0						37.3	20	3820	7940	1700
LMUR	12	0	-	30	0	0	-0.5	1.5	0.020	6	1670	3140	425		
				32	-0.016						-0.025	43	2160	4020	654
				37	0						49	2160	4020	654	
				40	-0.019						-0.030	57	3820	7940	1700
				80	0						68.8	57			

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 Low Temperature Black Chrome Plating, see P.304.
- Spacers and Stoppers for linear bushings can be selected from P.330.

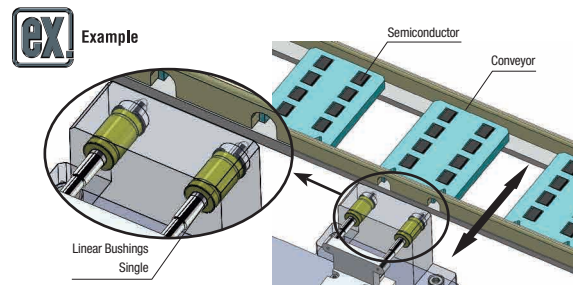
dr	Unit Price								
	LMU-N	LMU	LMUF-N	LMUF	LMUR	LMUM	LMUMF	SLMU	SLMUS
3									
4									
5									
6									
8									
10									
12									
13									
16									
20									
25									
30									
35									
40									
50									

Ordering Example

Part Number

- LMU20 (No Seal)
- LMU-N20 (Low Temperature Black Chrome Plating)
- LMUR20 (L Type Greased)
- LMUR20L (G Type Greased)
- LMUR20G (H Type Greased)
- LMUR20H (Alternative grease types available)

For Days to Ship, Price and Performance, see P.304.



▲Semiconductor conveyor tray locating mechanism

Linear Bushings

Double

= For customers using industry standard products =
 The part enclosed in the red frame is as per industry standard specifications (Outer cylinder SUJ2 equivalent, Retainer resin).
 Consider these specifications while selecting the product.

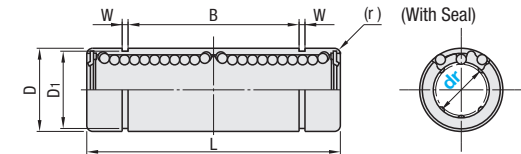
Features: Most common specification in Linear Bushings. Use Double Type in case moment load is to be applied.

Industry Standard



RoHS 10

Type	Outer Cylinder			Balls	Retainer Material	Ambient Operating Temp.	Accessory		
	Material	Hardness	Surface Treatment						
LMUW-N	SUJ2 Equivalent	58HRC~	-	SUJ2 Equivalent	Plastic (Duracon M90 Equivalent)	-20~ 80°C	Seal Material Nitrile Rubber (-20~120°C)		
LMUW					Stainless Steel (SUS)	-20~110°C			
LMUWF					SUS440C Equivalent	-		Plastic (Duracon M90 Equivalent)	-20~ 80°C
LMUWR								Stainless Steel (SUS)	-20~110°C
LMUWM								Plastic (Duracon M90 Equivalent)	-20~ 80°C
LMUWMF	SUS440C Equivalent	56HRC~	-	Stainless Steel (SUS)	-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)	
			No Surface Treatment	Surface Treatment								C (Dynamic) N	Co (Static) N			
LMUW-N (No Seal)	3	0	-0.010	7	0	0	-	-	0.3	0.010	4	138	210	0.51	3.2	
				8	-0.011							-0.015	176	254	0.63	4.8
				10	-0.015							-0.018	263	412	1.38	11
				12	0							11.5	324	529	2.18	16
				15	-0.011							-0.018	431	784	4.31	31
LMUW	6	0	-	19	0	0	-0.5	1.1	0.015	4	588	1100	7.24	62		
				20	-0.013						-0.021	657	1200	10.9	80	
				24	0						20.4	813	1570	11.6	90	
				29	-0.016						-0.021	1230	2350	19.7	145	
				30	0						27.3	1400	2740	26.8	180	
LMUWF	10	-0.010	-	29	0	0	-0.6	1.3	0.020	5	1560	3140	43.4	440		
				30	-0.016						-0.021	2490	5490	82.8	480	
				32	0						30.5	2650	6270	110	795	
				40	-0.019						-0.030	3430	8040	147	1170	
				80	0						68.8	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 Low Temperature Black Chrome Plating, see P.304.
- Spacers and Stoppers for linear bushings can be selected from P.330.

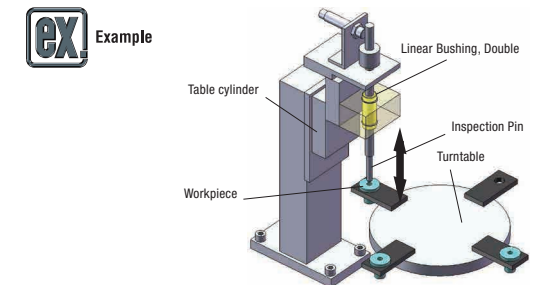
dr	Unit Price								
	LMUW-N	LMUW	LMUWF	LMUWR	LMUWM	LMUWMF	SLMUW	SLMUWS	
3									
4									
5									
6									
8									
10									
12									
13									
16									
20									
25									
30									
35									
40									
50									

Ordering Example

Part Number

- LMUW20 (No Seal)
- LMUW-N20 (Low Temperature Black Chrome Plating)
- LMUWR20 (L Type Greased)
- LMUWR20L (G Type Greased)
- LMUWR20G (H Type Greased)
- LMUWR20H (Alternative grease types available)

For Days to Ship, Price and Performance, see P.304.



▲Inspection instrument to confirm the precision of work piece hole