


# Linear Bushings (Lubrication Unit MX)

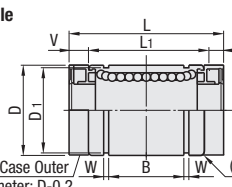
Single / Double / Flanged Single

**Linear Bushings (Lubrication Unit MX) – Straight Single & Double**

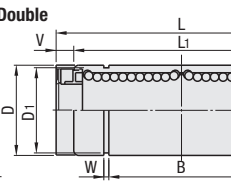



Type		Outer Cylinder			Balls	Pad Case / Retainer	Ambient Operating Temperature	Accessories
Single	Double	Material	Hardness	Surface Treatment	Material	Material		
LMU-MX	LMUW-MX	52100 Bearing Steel	58 HRC min.	—	52100 Bearing Steel	Plastic (Duracon M90 Equivalent)	-20~80°C	Seal Material Nitrile Rubber

Single



Double





Pad Case Outer Diameter: D-0.2

Ⓢ No need to fill with grease prior to use because the product is already filled with Lithium soap-based grease in addition to the built-in lubrication unit.

**Single** Ⓢ For linear bushings, hardened shafts with g6 tolerance are recommended. P.202-288 are recommended.

Part Number	D		L	L <sub>1</sub>		V		B	W	D <sub>1</sub>	(r)	Eccentricity (Max.)	Rows of Balls	Basic Load Rating		Mass (g)		
	dr	Tol.		Tol.	Tol.	Tol.	Tol.							C (Dynamic) N	Co (Static) N			
LMU-MX	10	0	19	0	39	29	5	19.4	0	1.3	18	0.4	4	0.012	372	549	35	
	12	0	21	0	41	30	5.5	20.4							20	412	598	45
	16	-0.009	28	-0.013	49	37	6	23.3	-0.4	1.6	27	0.8			775	1180	80	
	20	0	32	0	56	42	7	27.3							30.5	882	1370	109
	25	0	40	0	77	59	9	37.3	0	1.85	38	1.5	6	0.015	980	1570	255	
	30	-0.010	45	-0.016	84	64	10	40.8							43	1570	2740	286
	35	0	52	0	92	70	11	45.3							49	1670	3140	453
	40	0	60	0	104	80	12	56.3	-0.5	2.1	57	0.020			2160	4020	687	
	50	-0.012	80	-0.019	128	100	14	68.8							2.6	76.5	3820	7940

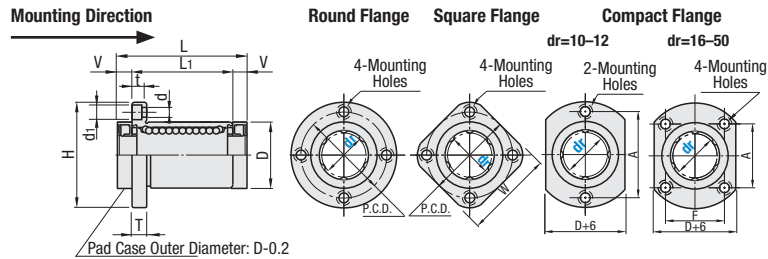
## Double

Part Number	D		L	L <sub>1</sub>		V		B	W	D <sub>1</sub>	(r)	Eccentricity (Max.)	Rows of Balls	Basic Load Rating		Allowable Static Moment (MoN·m)	Mass (g)		
	dr	Tol.		Tol.	Tol.	Tol.	Tol.							C (Dynamic) N	Co (Static) N				
LMUW-MX	10	0	19	0	65	55	5	41.4	0	1.3	18	0.4	4	0.015	588	1100	7.24	66	
	12	0	21	0	68	57	5.5	43.4							20	657	1200	10.9	84
	16	-0.010	28	-0.016	82	70	6	49.8	-0.5	1.6	27	0.8			1230	2350	19.7	152	
	20	0	32	0	94	80	7	57.8							30.5	1400	2740	26.8	191
	25	0	40	0	130	112	9	78.3	0	1.85	38	1.5	6	0.020	1560	3140	43.4	459	
	30	-0.012	45	-0.019	143	123	10	85.3							43	2490	5490	82.8	504
	35	0	52	0	157	135	11	94.8							49	2650	6270	110	823
	40	0	60	0	175	151	12	116.8	-0.6	2.1	57	0.025			3430	8040	147	1203	
	50	-0.015	80	-0.022	220	192	14	142.8							2.6	76.5	6080	15900	397

## Linear Bushings (Lubrication Unit MX) – Flanged Single Type



Type			Outer Cylinder			Balls	Pad Case / Retainer	Ambient Operating Temperature	Accessories
Round Flange	Square Flange	Compact Flange	Material	Hardness	Surface Treatment	Material	Material		
LHFR-MX	LHFS-MX	LHFC-MX	52100 Bearing Steel	58 HRC min.	—	52100 Bearing Steel	Plastic (Duracon M90 Equivalent)	-20~80°C	Seal Material Nitrile Rubber
LHFRM-MX	LHFSM-MX	LHFCM-MX			Electroless Nickel Plating	440C Stainless Steel Equivalent			



Ⓢ No need to fill with grease prior to use because the product is already filled with Lithium soap-based grease in addition to the built-in lubrication unit.

Part Number	D Tolerance		L	L <sub>1</sub>		V	H	T	d	d <sub>1</sub>	t	P.C.D.	W	F	A	Eccentricity	Rows of Balls	*Perpendicularity	Basic Load Rating			Mass(g)				
	dr	Tol.		No Surface Treatment	Surface Treatment														Tol.	Tol.	C (Dynamic) N	Co (Static) N	Round Flange	Square Flange	Compact Flange	
LHFR-MX LHFS-MX LHFC-MX LHFRM-MX LHFSM-MX LHFCM-MX	10	0	19	0	39	29	5	40	29	30	—	29	0.012	4	0.012	372	549	76	56	68						
	12	0	21	0	41	30	5.5	42								6	4.5	7.5	4.1	32	32	—	32	412	598	80
	16	-0.009	28	-0.016	49	37	6	48	8	5.5	9	5.1				38	37	22	31	775	1180	127	111	119		
	20	0	32	0	56	42	7	54								43	42	24	36	882	1370	191	156	178		
	25	0	40	0	77	59	9	62	10	7.4	10	6.6	11	6.1	0.015	5	0.015	980	1570	359	319	344				
	30	-0.010	45	-0.019	84	64	10	74										60	58	35	49	1570	2740	494	399	412
	35	0	52	0	92	70	11	82										67	64	38	55	1670	3140	678	588	603
	40	0	60	0	104	80	12	96	78	75	45	64	2160	4020				1093	913	946						
	50	-0.012	80	-0.022	128	100	14	116	98	92	56	80	3820	7940				2263	2063	2100						

Ⓢ For Precautions for Use, see P.369. Ⓢ Height-Adjusting Spacers for Flanged Bushings can be chosen from P.384.

\*Perpendicularity of D part to flange mounting surface

**Part Number Example**

Part Number	LMU-MX16
Part Number	LHFR-MX12

⊗ Various Grease Application Services are not applicable.