

# Lubrication **MX** Unit Series

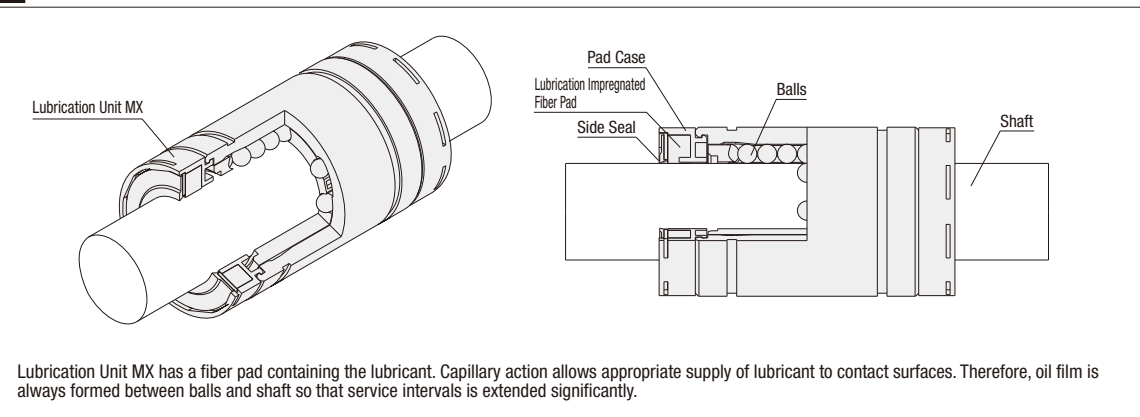
Patented

## Long Term Maintenance Free Lubrication Unit MX Characteristics and Features

### Characteristics of Lubrication Unit MX

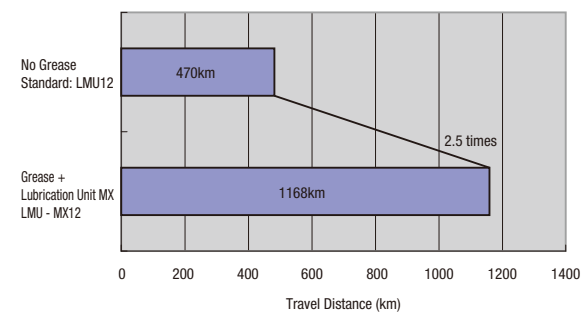
- Extended maintenance period**  
Long durability of lubrication performance has resulted in significant reduction of maintenance load especially with machines and equipment environments where applying grease is not easy.
- Environmentally friendly system**  
Proper amount of lubricant to ball rolling surface at right time makes the system environment-friendly.
- Cost Advantage**  
Contributes to reduction of maintenance costs and product troubles caused by failing to lubricate.
- Reduced manufacturing steps**  
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.

### Structure of Lubrication Unit MX



## 2.5x durability with a little cost addition to the Standard Type

### Endurance Test Result



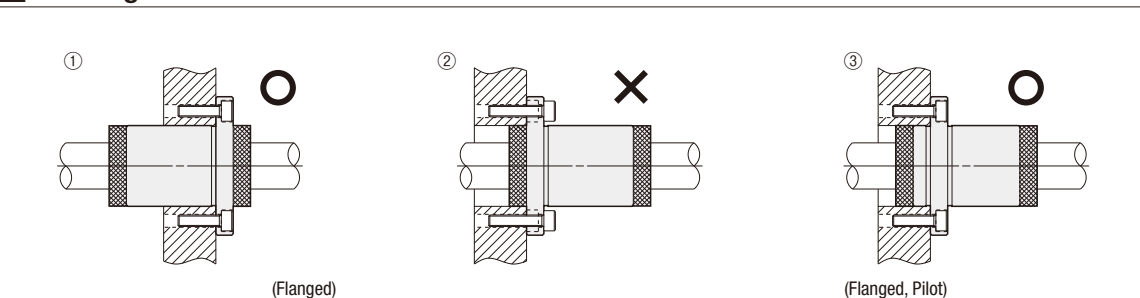
&lt;Test Condition&gt;

Sample : Linear Bushing LMU12 with Anti-rust oil Linear Bushing with Lubrication Unit LMU-MX12  
 Applied Load : 206N (50% against Basic Dynamic Load Rating 412N)  
 Average Speed : 42m/min(0.7m/sec)  
 Stroke : 100mm  
 Lubricant : Grease, initial filling only (LMU-MX12 only)  
 Shaft Material : 52100 Bearing Steel 58HRC  
 24 hours, continuously operated

With 50% of basic load rating applied for testing, the Lubrication Unit MX Type has shown a 2.5 times higher durability performance compared to the one without the MX lubrication unit.

\*The data above are for reference only, and not guaranteed by the manufacturer.  
 The data was revised to the above since the 2007 catalog after the safety margin was confirmed by increased test data points.

### Handling Cautions

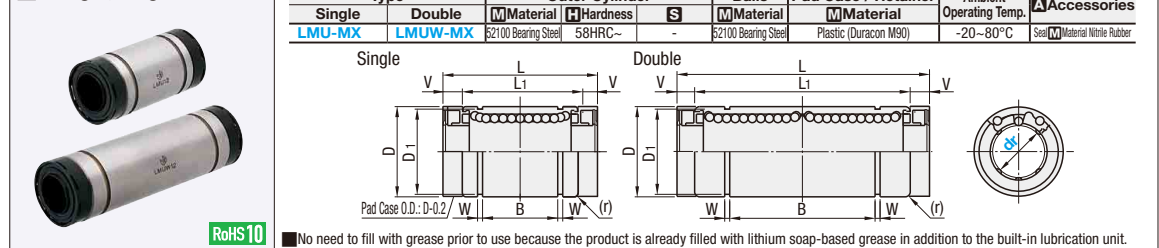


- When mounting flanged lubrication unit type, do not use the lubrication unit case as a pilot as shown in ②, as that may damage the case. Instead, use the Flange Type with Pilot as shown in ③.
- Do not disassemble as that may cause failures.

# Linear Bushings with Lubrication Unit MX

Single / Double / Flanged Single

### Straight, Single / Double



### Single

Part Number			D		L		L1		V		B		W		D1		(r)		Eccentricity		Rows of		Basic Load Rating		Mass	
Type	dr	Tolerance	Tolerance				Tolerance				Tolerance						(Max.)		Balls		C (Dynamic)		Co (Static)		(g)	
LMU-MX	10	0	19	0	39	29	0	5	19.4	0	1.3	18	0.4	0.012	4											
	12	0	21	0	41	30	0	5.5	20.4	0	1.3	20	0.8													
	16	-0.009	28	-0.013	49	37	-0.2	6	23.3	-0.4	1.6	27	0.8													
	20	0	32	0	56	42	0	7	27.3	0	1.6	30.5	0.8	0.015	5											
	25	0	40	0	77	59	0	9	37.3	0	1.85	38	1.5													
	30	-0.010	45	-0.016	84	64	0	10	40.8	0	2.1	43	1.5													
	35	0	52	0	92	70	-0.3	11	45.3	0	2.1	49	1.5	0.020	6											
	40	0	60	0	104	80	0	12	56.3	0	2.6	57	1.5													
	50	-0.012	80	-0.019	128	100	0	14	68.8	0	2.6	76.5	1.5													

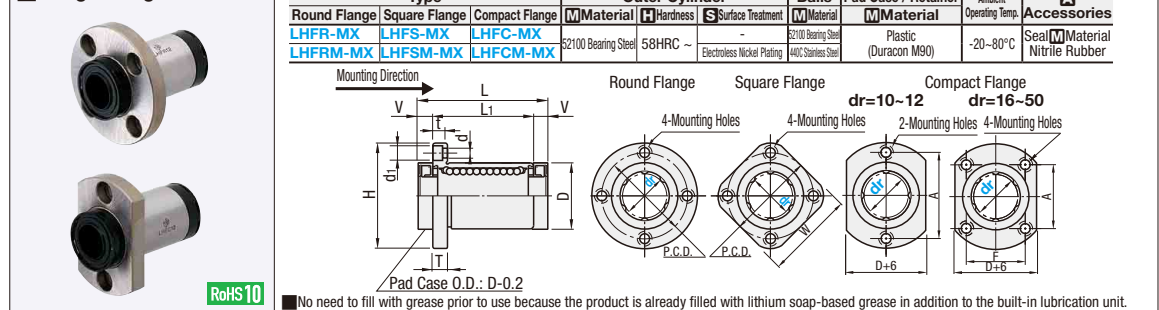
### Double

Part Number		D Tolerance		L		L1 Tolerance		V		B Tolerance		W		D1		(r)		Eccentricity (Max.)		Rows of Balls		Basic Load Rating		Mass (g)	
Type	dr	Tolerance																							
LMUW-MX	10	0	19	0	65	55	0	5	41.4	0	1.3	18	0.4	0.015	4							588	1100	7.24	66
	12	0	21	0	68	57	0	5.5	43.4	0	1.3	20	0.4	0.015	4							657	1200	10.9	84
	16	-0.010	28	-0.016	82	70	-0.3	6	49.8	-0.5	1.6	27	0.8	0.020	5							1230	2350	19.7	152
	20	0	32	0	94	80	0	7	57.8	0	1.6	30.5	0.8	0.020	5							1400	2740	26.8	191
	25	0	40	0	130	112	0	9	78.3	0	1.85	38	1.5	0.020	6							1560	3140	43.4	459
	30	-0.012	45	-0.019	143	123	0	10	85.3	0	2.1	43	1.5	0.025	6							2490	5490	82.8	504
	35	0	52	0	157	135	-0.4	11	94.8	0	2.1	49	1.5	0.025	6							2650	6270	110	823
	40	0	60	0	175	151	0	12	116.8	0	2.6	57	1.5	0.025	6							3430	8040	147	1203
	50	-0.015	80	-0.022	220	192	0	14	142.8	0	2.6	76.5	1.5	0.025	6							6080	15900	397	3163

For Precautions for Use, see P.266

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### Flanged Single



Part Number			D Tolerance				L		L1																				
Type	dr	Tolerance	No Surface Treatment		Surface Treatment		Tolerance		V	H	T	d	d1	t	P.C.D.	W	F	A	Eccentricity	Rows of Balls	Dependability	Basic Load Rating				Mass (g)			
																						C (Dynamic)	N (Static)	C (Static)	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	6	4.5	7.5	4.1	29	30	-	29	0.012	4	0.012	372	549	76	56	68			
	12	-0.009	21	0	-0.021	41	30		5.5	42	6	4.5	7.5	4.1	32	32	-	32	0.012	4	0.012	412	598	80	61	72			
	16		28	0		49	37		6	48	6	4.5	7.5	4.1	38	37	22	31	0.015	5	0.015	775	1180	127	111	119			
	20	0	32	0		56	42		7	54	8	5.5	9	5.1	43	42	24	36	0.015	5	0.015	882	1370	191	156	178			
	25	-0.010	40	0	-0.019	77	59	±0.3	9	62	8	5.5	9	5.1	51	50	32	40	0.015	6	0.015	980	1570	359	319	344			
	30		45	0	-0.025	84	64		10	74	10	6.6	11	6.1	60	58	35	49	0.020	6	0.020	1570	2740	494	399	412			
	35	0	52	0		92	70		11	82	10	6.6	11	6.1	67	64	38	55	0.020	6	0.020	1670	3140	678	588	603			
	40	-0.012	60	0	-0.030	104	80		12	96	13	9	14	8.1	78	75	45	64	0.020	6	0.020	2160	4020	1093	913	946			
	50		80	0		128	100		14	116	14	11.6	14	8.1	98	92	56	80	0.020	6	0.020	3820	7940	2263	2063	2100			

For Precautions for Use, see P.266 Height-Adjusting Spacers for Flanged Bushings can be chosen from P.286

Perpendicularity of D to flange mounting surface kgf=Nx0.101972



Price

Configure Online

dr	Straight Single		Straight Double		Round Flange				Square Flange				Compact Flange			
	LMU-MX		LMUW-MX		LHFR-MX		LHFRM-MX		LHFS-MX		LHFSM-MX		LHFC-MX		LHFCM-MX	
	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
	1~9 pc(s).	10~19 pcs.	1~9 pc(s).	10~19 pcs.	1~9 pc(s).	10~19 pcs.	1~9 pc(s).	10~19 pcs.	1~9 pc(s).	10~19 pcs.	1~9 pc(s).	10~19 pcs.	1~9 pc(s).	10~19 pcs.	1~9 pc(s).	10~19 pcs.
10																
12																
16																
20																
25																
30																
35																
40																
50																

Ordering Example

Part Number

LMU-MX16

LHFR-MX12

Various Grease Application Services are not applicable.

Days to Ship

Configure Online

For orders larger than indicated quantity, please request a quotation.