

# Lubrication Unit MX

Patent Pending



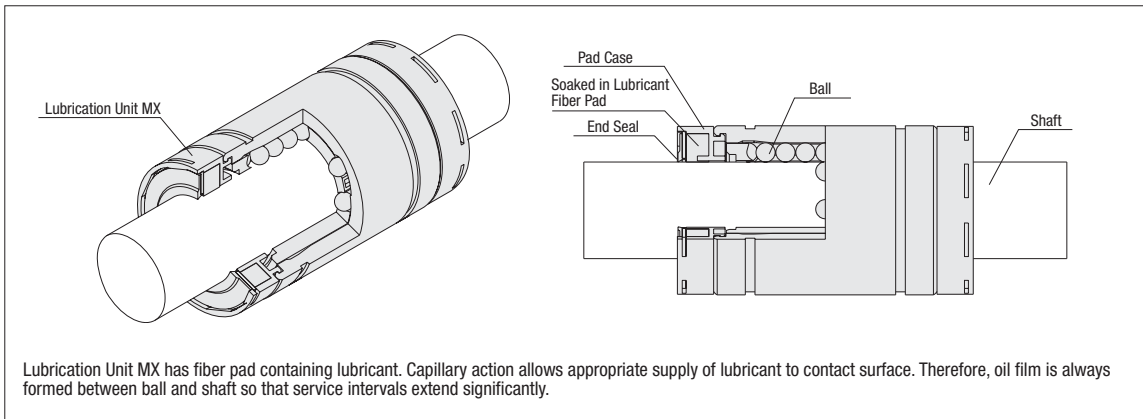
## Linear Bushings with Lubrication Unit MX

—Straight Type, Single and Double/Flanged Single Type—

**Price Reduction**  
5%

CAD Data

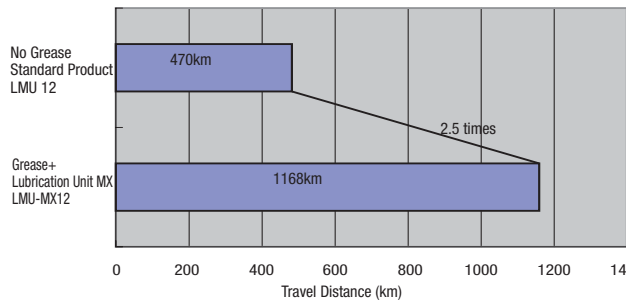
### Structure of Lubrication Unit MX



Lubrication Unit MX has fiber pad containing lubricant. Capillary action allows appropriate supply of lubricant to contact surface. Therefore, oil film is always formed between ball and shaft so that service intervals extend significantly.

### Features

- Extension of Maintenance Interval**  
Its long-lasting lubrication performance allows much easier maintenance especially on machines and equipment in difficult to reach environment.
- Environment-friendly System**  
Timely and proper-amount supply to ball contact surface realizes pollution-free and environment-friendly lubrication system.
- Cost Advantage**  
Reduces maintenance cost and problems caused by forgetting to refuel.
- Reduction of Assembling Processes**  
No need to refill grease because the ball parts are already filled with Lithium soap-based in addition to the lubrication unit.
- Endurance Test Result**



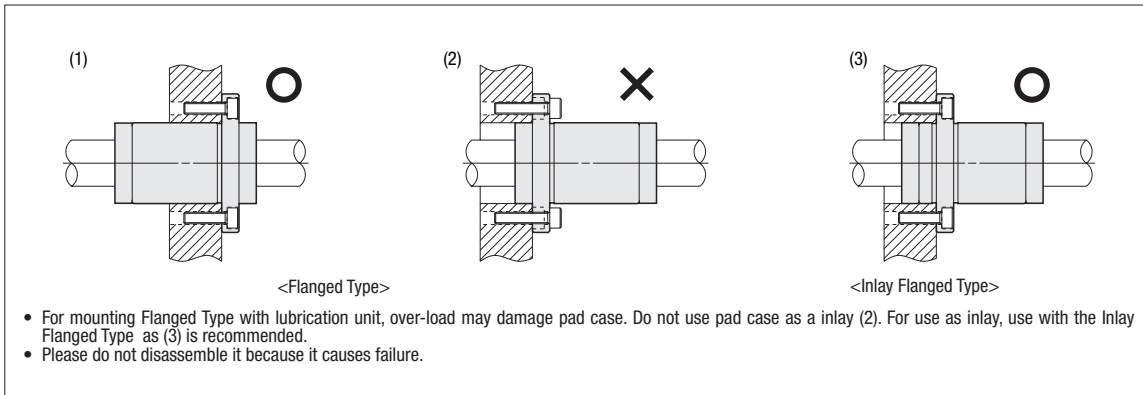
<Test Conditions>

Sample : Linear Bushing LMU12 before removal of antirust oil  
 Weight Loaded: 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)  
 Matching Material: 1.3505/100Cr6 58HRC  
 24-hour Continuous Running

Linear bushing with Lubrication Unit MX shows 2.5 times greater durability than standard products without grease under the test condition of  $P = 0.5 \times C$ .

\*The above data are for reference, not guaranteed.  
 Measured values have been revised following the confirmation of security through increased number of tests.

### Cautions



<Flanged Type>

<Inlay Flanged Type>

- For mounting Flanged Type with lubrication unit, over-load may damage pad case. Do not use pad case as a inlay (2). For use as inlay, use with the Inlay Flanged Type as (3) is recommended.
- Please do not disassemble it because it causes failure.

### Straight Type Single, Double



Type	Outer Cylinder	Ball	Pad Case/Retainer	Ambient Operating Temperature	Seal	
Single Type <b>LMU-MX</b>	1.3505/100Cr6	58HRC~	1.3505/100Cr6	Resin (Duracone M90 or equivalent)	-20~80°C	Seal Nitrile Rubber
Double Type <b>LMUW-MX</b>	1.3505/100Cr6	58HRC~	1.3505/100Cr6	Resin (Duracone M90 or equivalent)	-20~80°C	Seal Nitrile Rubber

Part Number	Type	dr	Tolerance	D Tolerance		L	L1 Tolerance	V	B Tolerance	W	D1	(r)	Eccentricity (Max.)	Rows of Balls	Basic Load Rating		Mass (g)
				C (Dynamic) N	Co (Static) N												
10	<b>LMU-MX</b>	19	0	39	29	5	19.4	0	1.3	18	0.4	0.012	4	372	549	35	
12		21	-0.009	41	30	5.5	20.4	0	1.3	20	0.8			412	598	45	
16		28	-0.013	49	37	6	23.3	-0.4	1.6	27	0.8			775	1180	80	
20		32	-0.016	56	42	7	27.3	0	1.85	30.5	1.5			882	1370	109	
25		40	-0.010	77	59	9	37.3	0	1.85	38	1.5	0.015	5	980	1570	255	
30		45	-0.016	84	64	10	40.8	0	2.1	43	1.5			1570	2740	286	
35		52	-0.012	92	70	11	45.3	-0.5	2.1	49	1.5	0.020	6	1670	3140	453	
40		60	-0.012	104	80	12	56.3	0	2.6	57	1.5			2160	4020	687	
50		80	-0.019	128	100	14	68.8	0	2.6	76.5	1.5			3820	7940	1763	

### Single Type

For linear bushings, linear shafts with g6 tolerance are recommended. P.103-180

### Double Type

Part Number	Type	dr	Tolerance	D Tolerance		L	L1 Tolerance	V	B Tolerance	W	D1	(r)	Eccentricity (Max.)	Rows of Balls	Basic Load Rating		Allowable Static Moment (Mo N-m)	Mass (g)
				C (Dynamic) N	Co (Static) N													
10	<b>LMUW-MX</b>	19	0	65	55	5	41.4	0	1.3	18	0.4	0.015	4	588	1100	7.24	66	
12		21	-0.010	68	57	5.5	43.4	-0.5	1.6	20	0.8			657	1200	10.9	84	
16		28	-0.016	82	70	6	49.8	0	1.6	27	0.8			1230	2350	19.7	152	
20		32	-0.012	94	80	7	57.8	0	1.85	30.5	1.5			1400	2740	26.8	191	
25		40	-0.012	130	112	9	78.3	0	1.85	38	1.5	0.020	5	1560	3140	43.4	459	
30		45	-0.019	143	123	10	85.3	0	2.1	43	1.5			2490	5490	82.8	504	
35		52	-0.015	157	135	11	94.8	-0.6	2.1	49	1.5	0.025	6	2650	6270	110	823	
40		60	-0.022	175	151	12	116.8	0	2.6	57	1.5			3430	8040	147	1203	
50		80	-0.022	220	192	14	142.8	0	2.6	76.5	1.5			6080	15900	397	3163	

For Height-Adjusting Spacers, refer to P.260.

### Flanged Single Type



Type	Outer Cylinder	Ball	Pad Cases/Retainers	Ambient Operating Temperature	Seal	
Round Flange <b>LHFR-MX</b>	1.3505/100Cr6	58HRC~	1.3505/100Cr6	Resin (Duracone M90 or equivalent)	-20~80°C	Seal Nitrile Rubber
Square Flange <b>LHFS-MX</b>	1.3505/100Cr6	58HRC~	1.3505/100Cr6	Resin (Duracone M90 or equivalent)	-20~80°C	Seal Nitrile Rubber
2-Flat Flange <b>LHFC-MX</b>	1.3505/100Cr6	58HRC~	1.3505/100Cr6	Resin (Duracone M90 or equivalent)	-20~80°C	Seal Nitrile Rubber
Round Flange <b>LHFRM-MX</b>	1.3505/100Cr6	58HRC~	1.3505/100Cr6	Resin (Duracone M90 or equivalent)	-20~80°C	Seal Nitrile Rubber
Square Flange <b>LHFSS-MX</b>	1.3505/100Cr6	58HRC~	1.3505/100Cr6	Resin (Duracone M90 or equivalent)	-20~80°C	Seal Nitrile Rubber
2-Flat Flange <b>LHFCM-MX</b>	1.3505/100Cr6	58HRC~	1.3505/100Cr6	Resin (Duracone M90 or equivalent)	-20~80°C	Seal Nitrile Rubber

Part Number	Type	dr	Tolerance	D Tolerance		L	L1 Tolerance	V	H	T	d	d1	t	P.C.D.	W	F	A	Eccentricity	Perpendicularity	Basic Load Rating		Mass (g)		
				C (Dynamic) N	Co (Static) N															Round Flange	Square Flange	2-Flat Flange		
10	<b>LHFR-MX</b>	19	0	39	29	5	40	6	4.5	7.5	4.1	29	30	—	29	0.012	0.012	372	549	76	56	68		
12		21	-0.009	41	30	5.5	42	6	4.5	7.5	4.1	32	32	—	32	0.012	0.012	412	598	80	61	72		
16		28	-0.013	49	37	6	48	8	5.5	9	5.1	38	37	22	31	0.015	0.015	775	1180	127	111	119		
20		32	-0.016	56	42	7	54	8	5.5	9	5.1	43	42	24	36	0.015	0.015	882	1370	191	156	178		
25		40	-0.010	77	59	9	62	10	6.6	11	6.1	51	50	32	40	0.020	0.020	980	1570	359	319	344		
30		45	-0.016	84	64	10	74	10	6.6	11	6.1	60	58	35	49	0.020	0.020	1570	2740	494	399	412		
35		52	-0.012	92	70	11	82	10	6.6	11	6.1	67	64	38	55	0.020	0.020	1670	3140	678	588	603		
40		60	-0.012	104	80	12	96	13	9	14	8.1	78	75	45	64	0.020	0.020	2160	4020	1093	913	946		
50		80	-0.022	128	100	14	116	13	9	14	8.1	98	92	56	80	0.020	0.020	3820	7940	2263	2063	2100		

For linear bushings, linear shafts with g6 tolerance are recommended. P.103-180

dr	Unit Price															
	Straight Single		Straight Double		Round Flange				Square Flange				2-Flat Flange			
	LMU-MX	LMUW-MX	LHFR-MX	LHFRM-MX	LHFS-MX	LHFSS-MX	LHFC-MX	LHFCM-MX	LHFR-MX	LHFRM-MX	LHFS-MX	LHFSS-MX	LHFC-MX	LHFCM-MX	LHFR-MX	LHFRM-MX
10	5.10	4.80	7.50	7.10	7.10	6.70	8.90	8.40	7.60	7.20	9.50	9.00	7.70	7.30	9.80	9.30
12	5.00	4.70	7.80	7.40	7.60	7.20	9.50	9.00	8.00	7.60	10.10	9.50	8.20	7.70	10.40	9.80
16	6.20	5.80	9.90	9.40	9.50	9.00	12.00	11.40	10.10	9.50	12.80	12.10	10.20	9.60	13.00	12.30
20	8.20	7.70	13.20	12.50	11.40	10.80	14.40	13.60	12.10	11.40	15.40	14.60	12.10	11.40	15.40	14.60
25	10.30	9.70	19.00	18.00	16.40	15.50	20.60	19.50	17.40	16.50	22.00	20.90	17.30	16.40	21.80	20.70
30	14.20	13.40	25.00	23.70	22.10	20.90	27.90	26.50	23.50	22.30	29.80	28.30	23.10	21.90	29.50	28.00
35	21.00	19.90	34.20	32.40	34.10	32.30	40.70	38.60	36.50	34.60	43.10	40.90	37.80	35.90	45.30	43.00
40	27.90	26.50	46.90	44.50	42.90	40.70	51.90	49.30	46.00	43.70	55.20	52.40	47.80	45.40	58.00	55.10
50	34.50	32.70	58.30	55.30	56.60	53.70	74.20	70.40	60.90	57.80	78.60	74.60	63.00	59.80	83.30	79.10

For orders larger than indicated values, please request for quotation.

Order Part Number  
 Example **LMU-MX16**  
**LHFR-MX12**

Days to Ship **8 Days**

NO Various Grease Application Services