

Single Axis Actuator LX - Overview

Single Axis Actuator Lubrication Unit Series



For Single Axis Actuator LX Series selections, please use our 2D and 3D CAD data and Technical Calculation Software (free of charge).

LX Related Information
Specifications P. 411 ~ P. 414
Selection / Life Calculation Example P2235 ~ P2238

High Accuracy, Compactness, Excellent Cost vs. Performance

Single Axis Actuators



Excellent Linear Motion Solution for Automation Designs

- High Accuracy** High Grade accuracies applied as standard (for all standard grade products).
Manufactured by MISUMI GROUP SURUGA Production Platform Co., Ltd. (former MISUMI-Suruga Seiki Co. Ltd.), reputable XY Stage provider.
Repeatability of $\pm 5\mu\text{m}$ guaranteed. Precision Grade ($\pm 3\mu\text{m}$) is selectable.
- Compact** Exceptional low-profile design
Low-profile achieved by the integral structure of blocks. Suitable for limited spaces.
- Excellent Cost vs. Performance** High Grade specs. are offered at reasonable Standard Grade prices.
High Grade accuracy at Standard Grade prices. Achieving cost reduction of automation equipment.

Structures and Features

特長 ① Base Length variations that allow flexible designs

特長 ③ Locating dowel holes on the base

特長 ② Space saving low-profile stage

特長 ④ Locating dowel holes on blocks (Cover Type)

Standard Type

Block
Integral Structure of Ball Screw Nuts and Linear Guide Mechanism

Built-in Deep Groove Bearing

Ball Screw
Precision (Ground) Ball Screws are used.
Low Dust Generation Grease is selectable.

Built-in Angular Contact Bearing

Base
High-rigidity Carbon Steel
The side surface has sensor mounting tapped holes.
LTBC Plating has excellent rust resistance and tribological properties.

Motor Bracket
Applicable to various manufacturers' servo and stepping motors.
Also available without bracket.

Rail Shape
Double Row Gothic Arch Configuration
Compactness and high rigidity with four direction equal load capability accomplished.

特長 ① Base Length
Fixed Length 50mm
Selectable Type: 3 目目発送

特長 ③ Dowel Holes for Locating
The base has dowel holes at two locations.
Easy assembly / Enhanced reproducibility

特長 ④ Dowel Holes for Locating
Cover Block has dowel holes at two locations.
Easy assembly / Enhanced reproducibility

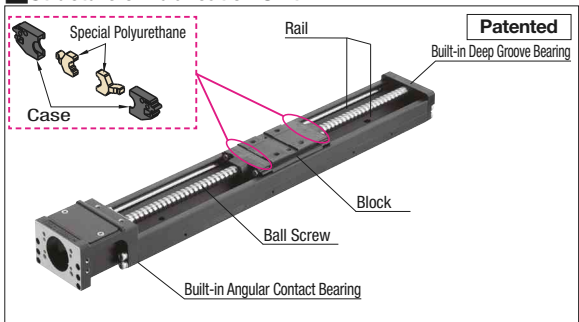
特長 ② Low-profile Design
Block Integral Structure
Cover Type Blocks also achieve low-profile.

Cover Type

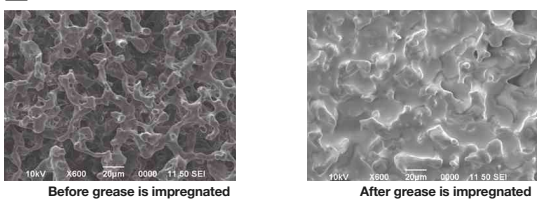
Design/Utility Model Registered

Cover Type Height
LX15 21mm
LX20 27mm
LX26 33mm
LX30 40mm
LX45 57mm

Structure of Lubrication Unit MX



Enlarged Photos of Special Polyurethane Pores

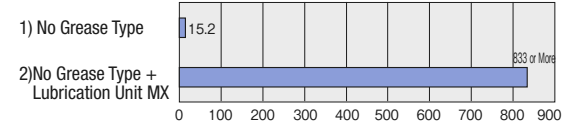


Grease impregnated special polyurethane provides appropriate supply of grease on ball screws and rails.

Features

- 1 Long Term Maintenance-free Condition**
 - Lubrication Unit MX is a self-lubrication unit constructed of grease impregnated special polyurethane. Capillary action provides appropriate supply of grease.
 - Oil film is always formed on the ball screws and rails, providing long term maintenance-free operations.
- 2 Cost Advantages**
 - MX unit-equipped products significantly reduce lubrication frequency, which significantly saves maintenance time and costs.

Endurance Test Results

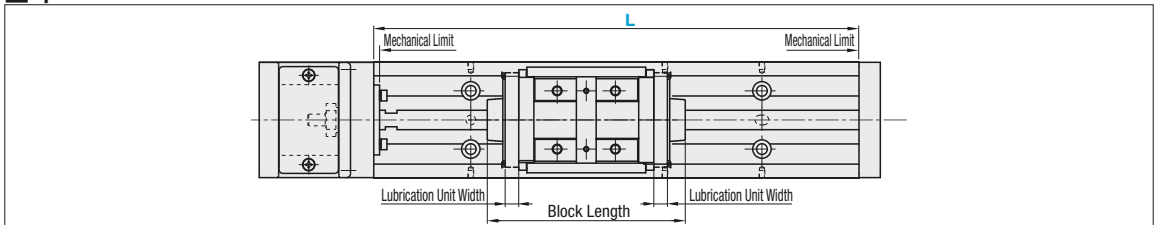


MX unit-equipped products showed good lubrication conditions even after exceeding 800 hrs, while part seizure was observed with non-greased samples within 20 hrs.
* These are not guaranteed values but reference values.

Test Conditions

(1) Part Number	LX2605-B1-300
(2) Installation Orientation	Vertical Test
(3) Load Condition	15kgf Load
(4) Test Stroke	200mm
(5) Travel Speed	136mm/s

Specifications of MX Series



MX Series Specifications

Part Number	Block Qty.	Base Length (L)	Effective Stroke	Block Length	Lubrication Unit Width	Page
LX15□□-MX	(1 pc.) B1	100	43.9	49.6	4	P415, 416
		125	68.9			
		150	93.9			
		175	118.9			
		200	143.9			
LX20□□-MX	(1 pc.) B1	150	76.5	67	5	P417, 418
		200	126.5			
		250	176.5			
		300	226.5			
		400	305			
LX26□□-MX	(1 pc.) B1	200	105	88	6	P421, 422
		250	155			
		300	205			
		350	255			
		400	305			
LX(R)30□□-MX	Long Block (1 pc.) B1	200	90	102	7	P425, 426 P433, 434
		250	140			
		300	190			
		350	240			
		400	290			
	Short Block (1 pc.) S1	450	340	76.5		
		500	390			
		550	440			
		600	490			
		150	65.5			
		200	115.5			
		250	165.5			
		300	215.5			
		350	265.5			
		400	315.5			
LX(R)45□□-MX	Long Block (1 pc.) B1	450	365.5	137.6	8	P429, 430 P435, 436
		500	415.5			
		550	465.5			
		600	515.5			
		340	194.4			
	Short Block (1 pc.) S1	390	244.4	100.1		
		440	294.4			
		490	344.4			
		540	394.4			
		590	444.4			
		340	231.9			
		390	281.9			
		440	331.9			
		490	381.9			
		540	431.9			

MX Series Unit Price

Part Number	Unit Price
LX15□□-MX	
LX20□□-MX	
LX26□□-MX	
LX(R)30□□-MX	
LX(R)45□□-MX	

For LX-MX, listed product price is added to the unit price.
Volume Discount Rate is applicable.

Effective stroke is indicated in dimensions with a margin of 2.5mm each from the ends.

Ordering Example	Part Number	Block Qty.	Motor Adapter Plates	Base Length (L)
	LX2001C-MX	B1	A2040	200
	LXR3010C-MX	B1	RA3040	200