

LMB

Linear Guide Lock

Lock Unit

Overview

In systems using linear guides, this is a lock unit that can respond to cases where you want to lock the workpiece at a predetermined position after moving it, or for emergency stops for safety.

Features

- Compact but powerful holding force.
- Very little backlash when locked.
- Unit available for holding when stopped, stopping in emergencies, or position locking.
- Unlocked by air supply. (Manual release also possible)
- Dust-proofing handled by a scraper provided as standard in front of and behind the lock unit.

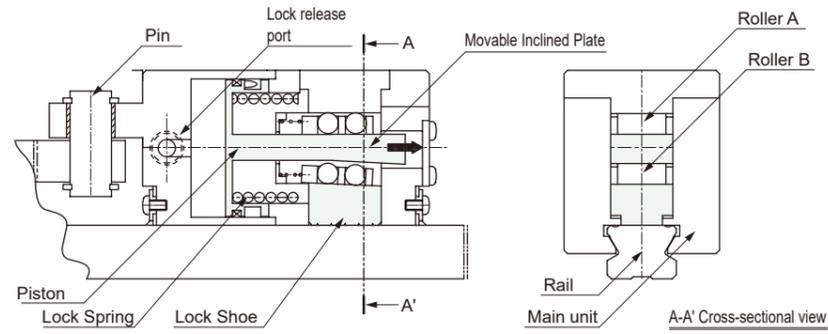


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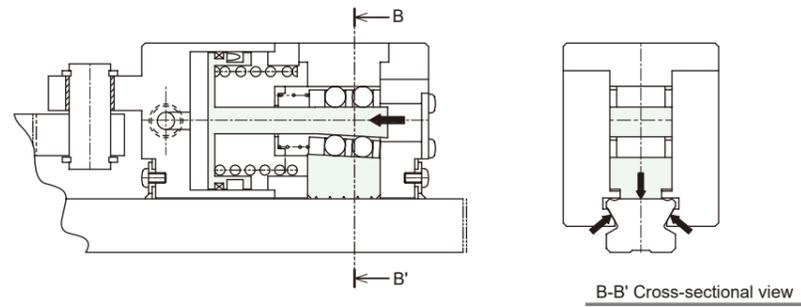
Operational Principle

● At Lock Release



By pressurizing air to the lock release port, the piston and the tapered movable inclined plate connected to the piston move in the direction of the arrow, and roller B and the movable inclined plate become non-contact. The pressing force of the lock shoe against the rail is eliminated, and the lock is released. However, the lock shoe and rail may be in contact.

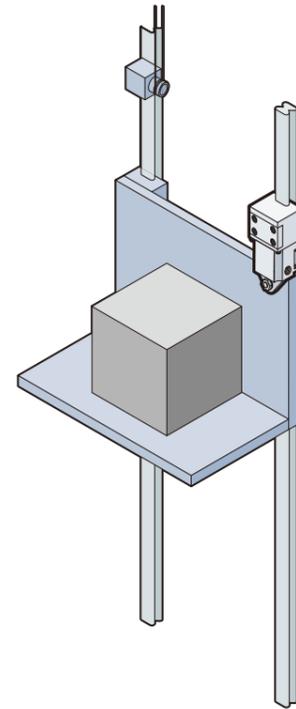
● At Lock



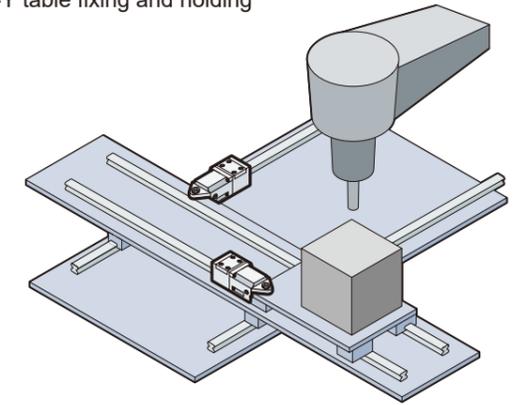
By exhausting air from the lock release port, the lock spring causes the piston and the tapered movable inclined plate connected to the piston to move in the direction of the arrow, and the amplification effect of the taper strongly presses the lock shoe against the rail via roller B. Frictional force is generated on the rail by the three-directional pressurizing force as shown with the arrows in the B-B' sectional view, and the rail is held with force.

Application Examples

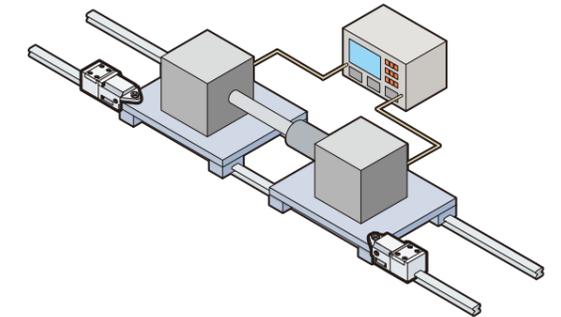
● Table fixing and position locking



● X-Y table fixing and holding



● Table fixing and holding at the desired position



Lock Unit

UB
JSB3
LMB
LML

Cylinder Switch
Ending

Lock Unit

UB
JSB3
LMB
LML

Cylinder Switch
Ending



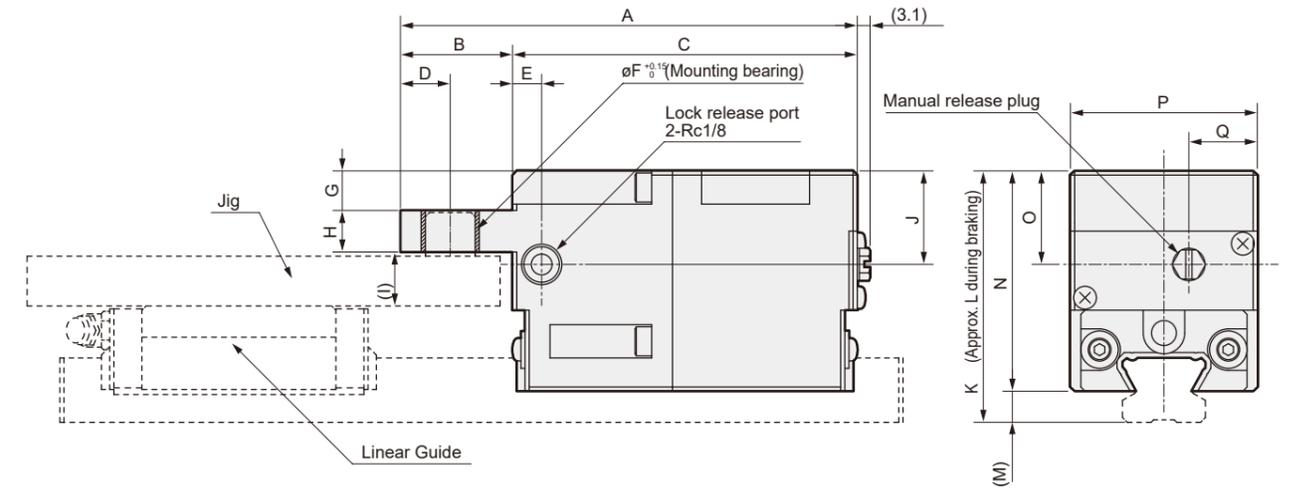
Linear Guide Lock
LMB Series

Do not disassemble



LMB Series
Dimensional Drawings

Dimensional Drawings



Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
LMB-SR-15	100	24	76	10	7	10	7	8	8	16.5	47	47.5	6.5	40.5	17.5	35	13
LMB-SR-20	110	27	83	12	7	12	9.5	10	13	22.5	60.5	61	7.5	53	22.5	45	16.5
LMB-SR-25	125	32	93	13.5	7	15	13	10	17	27.5	73	73.5	9	64	27.5	55	19.5

Note: The rail and slide table dimensions are not shown since they are manufactured by THK.

Model No. Notation

Compatible guide: Made by THK CO., LTD.

LMB - SR - 15

Model Number

① Operating Rail Size

① Operating Rail Size

Code	Content
15	SR-15/SSR-15
20	SR-20/SSR-20
25	SR-25/SSR-25

Specifications

Item	LMB-SR-15	LMB-SR-20	LMB-SR-25
Operating Rail	SR-15/SSR-15 Made by THK CO., LTD.	SR-20/SSR-20 Made by THK CO., LTD.	SR-25/SSR-25 Made by THK CO., LTD.
Operating Fluid	Compressed Air		
Max Operating Pressure MPa	1.0		
Min Operating Pressure MPa	0.35		
Proof Pressure MPa	1.5		
Ambient Temperature °C	-5 to 60°C (however, no freezing)		
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)		
Port Size	Rc1/8		
Holding Force N *1	1175	1960	2450
Sliding resistance value N Reference value *2	5.8 or less	9.8 or less	15.6 or less
Weight g	600	1100	1900

*1: Holding force is the ability to hold a static load without vibration or impact in the locked operating state under no load.

*2: This is the resistance value (reference value) when sliding horizontally on a rail coated with Albania Grease No. 2 (Showa Shell Sekiyu).

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Cylinder Switch

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To Use This Product Safely

Be sure to read this before use. For general cylinder information, see Intro 41, and for cylinder switches, see P. 1512.

Individual Precautions: Linear guide lock LMB Series

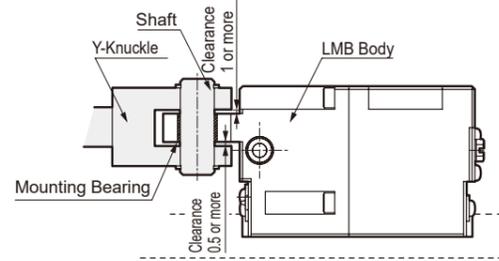
Design / Selection

CAUTION

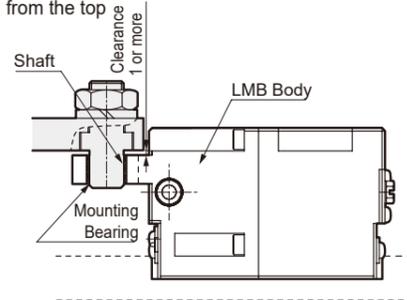
- Make sure that impact load is not applied to the Lock Units. There is a possibility of slipping due to impact force.
- Do not apply the lateral load moment to a lock unit.
- Avoid use in very dusty areas, or where water or oil could come in contact. This will cause a decrease in holding force.
- Do not place a workpiece directly onto the lock unit.

Mounting Method

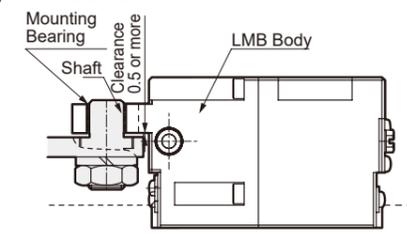
- Example of Y rod clevis installation



- Fixing from the top



- Fixing from the bottom



Insert a shaft (pin) into the mounting bearing and connect it to the slide table. At that time, provide clearance as shown in the diagram above. Structurally, the LMB body moves up and down during lock operation, so if it is fixed without clearance, the lock will not engage.

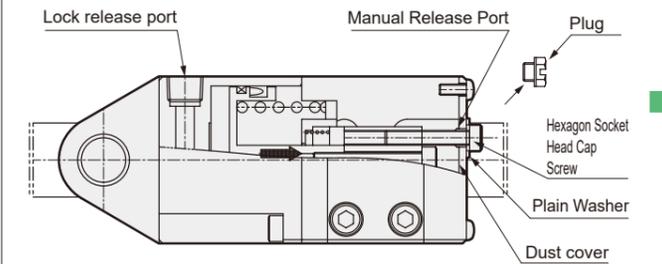
During Use

Warning

- Never disassemble the lock unit, as this is dangerous.

CAUTION

How to unlock manually



- Confirm that external force is not applied when there is no air at the lock release port, and then disconnect the plug.
- From the hole from which the plug was removed, insert the M3×18 (LMB-SR-15) or M4×22 (LMB-SR-20, 25) Hexagon Socket Head Cap Screw until the screw is engaged. When inserting Hexagon Socket Head Cap Screws, insert a flat washer and prevent the bolt seating surface from contacting the dustproof cover.
- From the state where the threads are caught, if the screw is screwed in until it no longer moves, the lock will be released and freed.

- *1) The product is in a manually released state at the time of shipment. Store the Hexagon Socket Head Cap Screws and flat washers so as not to lose them.
- *2) Do not use Hexagon Socket Head Cap Screws of sizes other than those listed above. There is a possibility of screw damage or inability to release the lock.
- *3) If manually released with the Hexagon Socket Head Cap Screw seating surface in contact with the dustproof cover, the dustproof cover will be scraped and dust will be generated. Also, since the plug may not be able to be screwed in, insert a flat washer and manually release it in a non-contact state.

For precautions during mounting, installation, adjustment, use, and maintenance, refer to "During Use" in this catalog and the CKD Components Product website (<https://www.ckd.co.jp/kiki/en/>) -> "Model No." -> [Instruction Manual](#).

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