

LML

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 holding during stops for safety and fall prevention.

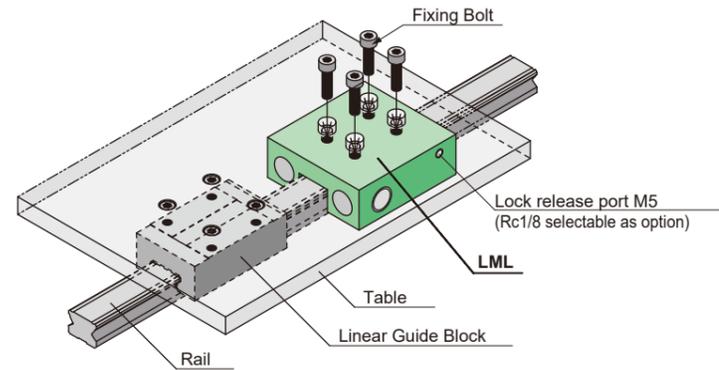


CONTENTS

Product Introduction/Usage Examples	642
● LML	643
⚠ Precautions for Use	648

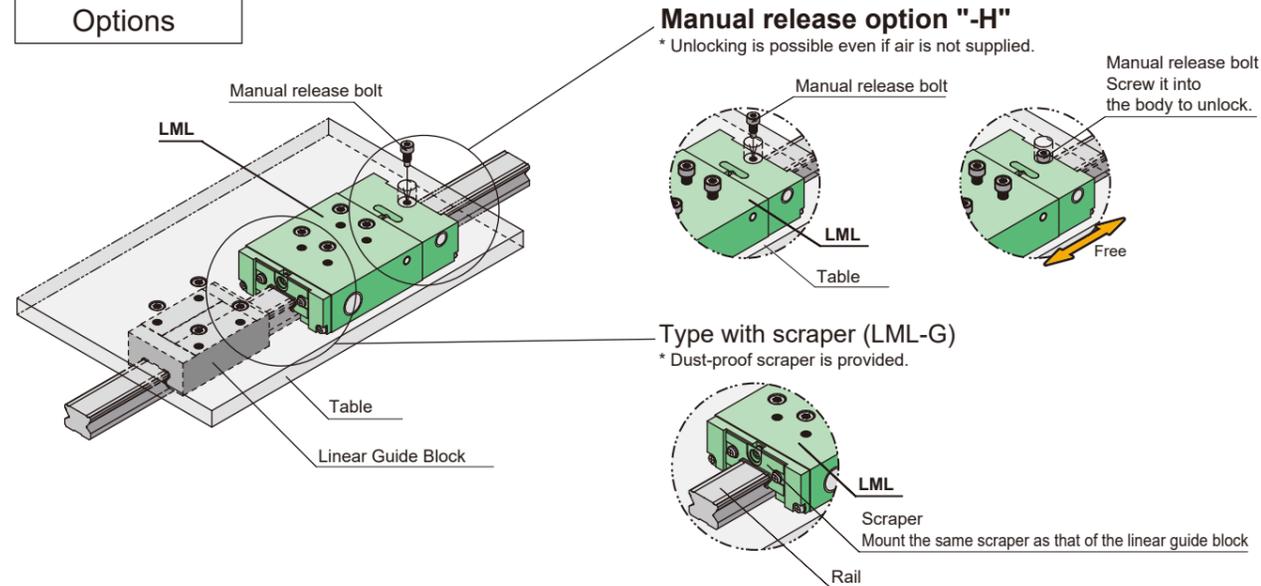
Product Introduction

Since it is the same height as the linear guide block, the lock can make good use of the empty space.



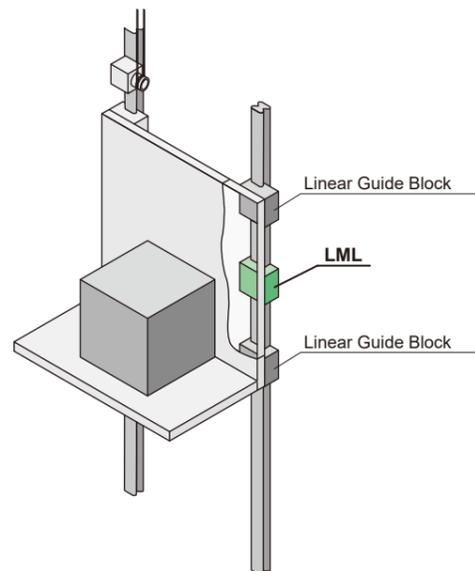
- ◆ Compact but powerful holding force.
- ◆ Unlocked by air supply (Manual release option is available separately)
- ◆ Useful for holding the cylinder during stop and position locking (holding the cylinder stationary)
- ◆ RoHS Directive compliant

Options



Application Examples

- Table fixing, position locking and holding



Linear Guide Lock

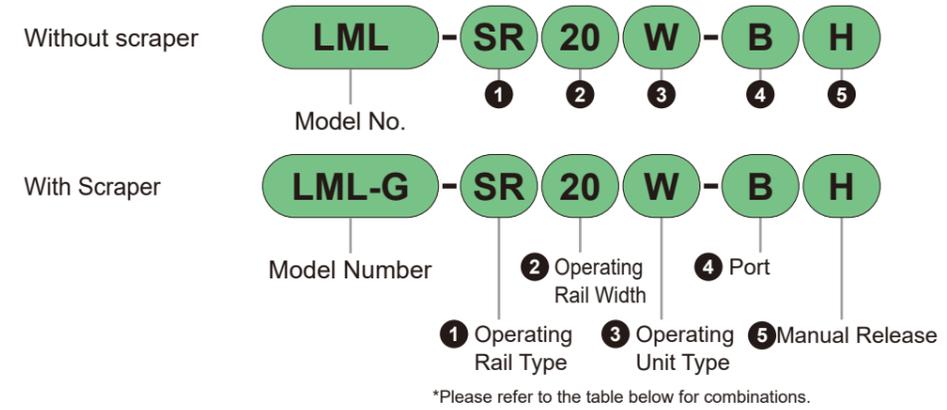
LML Series

Do not disassemble



Model No. Notation

Compatible guide: Made by THK CO., LTD.



1 Operating Rail Type 2 Operating Rail Width 3 Operating Unit Type

2 Operating Rail Width	1 Operating Rail Type																										
	SR				SSR				HSR				SHS														
15	●	-	-	-	●	●	●	●	●	-	-	-	●	●	●	-											
20	●	-	-	-	●	●	●	●	●	●	●	●	●	●	●	-											
25	-	●	-	-	●	●	●	●	●	●	●	●	●	●	●	●											
30	●	-	-	-	●	-	-	-	●	●	●	●	●	●	●	●											
35	●	-	-	-	●	-	-	-	●	●	●	●	●	●	●	●											
3 Operating Unit Type	W	V	TB	SB	WY	VY	TBY	SBY	XW	XV	XTB	A	B	R	LA	LB	LR	CA	HA	CB	HB	C	LC	V	LV	R	LR

2 Operating Rail Width	1 Operating Rail Type																			
	NR			NRS						SNR			SNS							
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
30	●	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
35	●	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
3 Operating Unit Type	A	LA	B	LB	R	LR	A	LA	B	LB	R	LR	C	LC	R	LR	C	LC	R	LR

4 Port

Code	Content
Blank	Lock release port M5
B	Lock release port Rc1/8

5 Manual Release

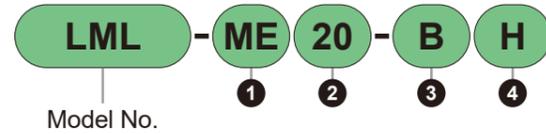
Code	Content
Blank	None
H	Available (dedicated release bolt included)

*1: When performing manual release, always do so with the LML attached to the rail.

Model No. Notation

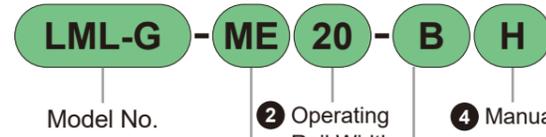
Compatible guide: IKO

Without scraper



Model No.

With Scraper



Model No.

② Operating Rail Width

③ Port

① Operating Rail Type and Unit Type

*Please refer to the table below for combinations.

① Operating Rail Type and Unit Type ② Operating Rail Width

② Operating Rail Width	① Operating Rail Type and Unit Type																	
	ME	MEC	MET	METC	LWE	LWEC	LWET	LWETC	MES	MESC	LWES	LWESC	MEG	METG	LWEG	LWETG	MESG	LWESG
15		●				●			●		●					●		
20		●				●			●		●					●		
25		●				●			●		●					●		
30		●				●			●		●					●		
35		●				●			●		●					-		

② Operating Rail Width	① Operating Rail Type and Unit Type															
	LWH	LWHT	LWHD	LWHS	MH	MHT	MHD	MHS	LWHTG	MHG	MHTG	LWHS	MHSG	LWHG	MHDG	LWHDG
15	●		●	●	●	●	●									
20	●			●	●		●		●		●		●			
25	●		●	●	●	●	●		●		●		●	●	●	●
30	●		●	●	●	●	●		●		●		●	●	●	●
35	●		●		●	●		●					●	●	●	●

③ Port

Code	Content
Blank	Lock release port M5
B	Lock release port Rc1/8

④ Manual Release

Code	Content
Blank	None
H	Available (dedicated release bolt included)

*1

*1: When performing manual release, always do so with the LML attached to the rail.

Specifications

Item		LML-15	LML-20	LML-25	LML-30	LML-35
		LML-G15	LML-G-20	LML-G-25	LML-G-30	LML-G-35
Rail Width	mm	15	20	25	30	35
Compatible Guide Manufacturer		Made by THK CO., LTD./NIPPON THOMPSON 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 (however, no freezing)				
Lubrication		Not allowed				
Port Size		M5 (Rc1/8: Option selection)				
Holding Force	N *2	300	450	600	850	1150
Initial Backlash		±0.05				
Weight	Main unit	600	900	1200	1900	2800
	Scraper Added Weight	50	70	100	180	220
	Manual Release Added Weight	160	230	340	550	820

*1 For operating rail types and unit types, refer to "How to order".

*2 Holding force is the ability to hold a static load without vibration or impact in the locked operating state under no load. Note that the above holding force is the value when Albania Grease No. 2 (Showa Shell Sekiyu) is applied, and the holding force may not be satisfied depending on the operating environment.

Lock Unit

Lock Unit

UB

UB

JSB3

JSB3

LMB

LMB

LML

LML

Cylinder Switch

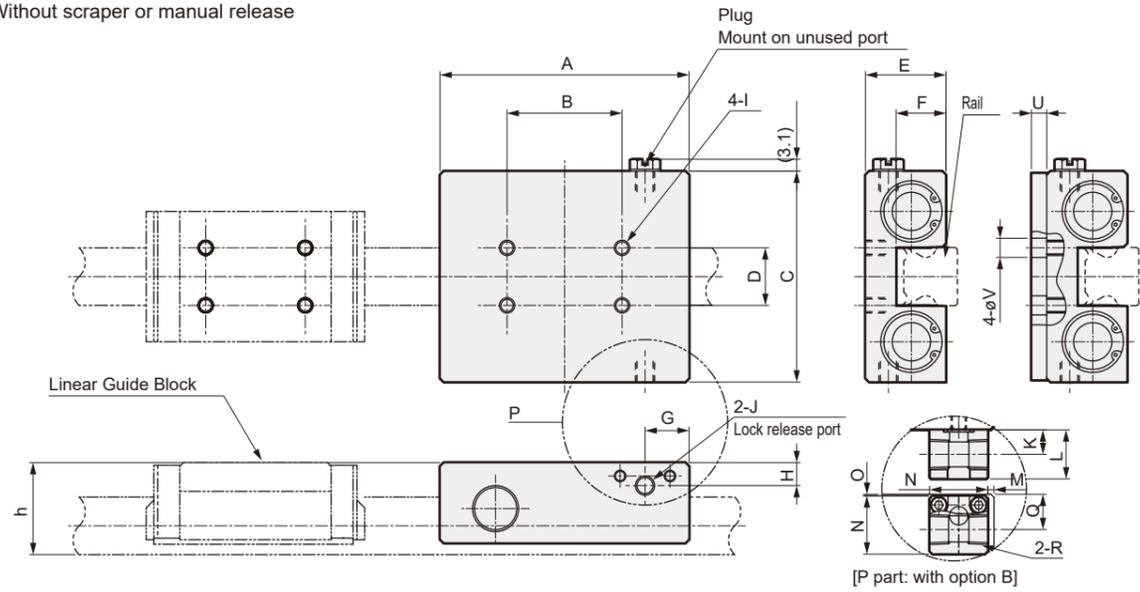
Cylinder Switch

Ending

Ending

Dimensional Drawings

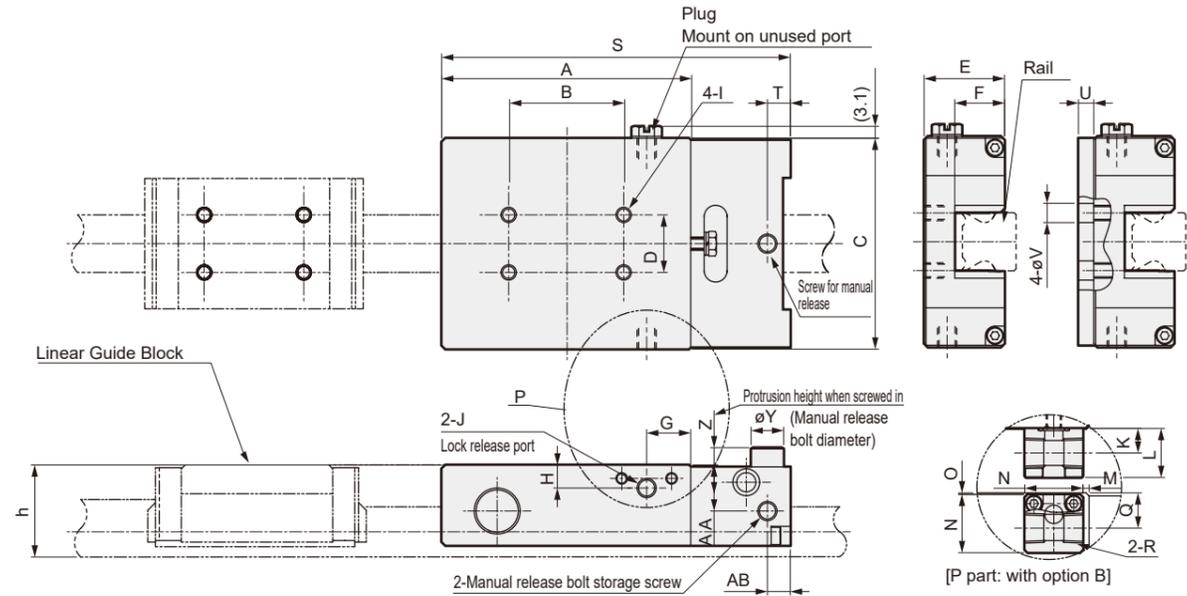
● Without scraper or manual release



Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	R	U	V
LML-□-15	65	30	55	15	21	13	11.5	6	M4 Depth 5	M5	8	16	2	19	0.5	11.5	Rc1/8	4	5
LML-□-20	70	30	66	20	24.5	13.5	12	6	M5 Depth 6	M5	8	16	2.5	19	0.5	11.5	Rc1/8	-	-
LML-□-25	75	30	75	20	29	16	10	6	M6 Depth 7	M5	8	16	0.5	19	0.5	11.5	Rc1/8	4	7
LML-□-30	82	30	88	25	35.5	20.5	12	6.5	M6 Depth 9	M5	8	16	2.5	19	1	12	Rc1/8	3	7
LML-□-35	90	40	102	30	40	22	12	7	M8 Depth 9	M5	8	16	2.5	19	1.5	12.5	Rc1/8	7	9

*1: h dimension is determined by the guide used. Please refer to the relevant catalog, etc.
 *2: U and V dimensions are only for HSR/SHS-R/LR (made by THK CO., LTD.) and MHD(G)/LWHD(G) (made by NIPPON THOMPSON CO., LTD.) types.

● Without scraper, with manual release

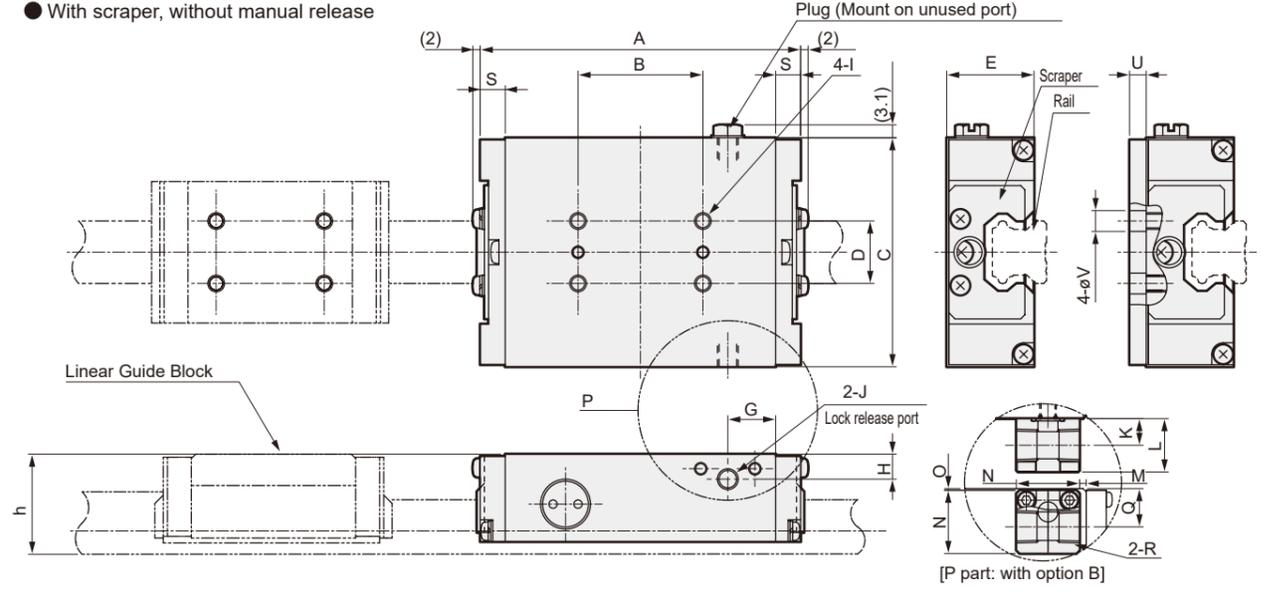


Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	R	S	T	U	V	Y	Z	AA	AB
LML-□-15-□-H	65	30	55	15	21	13	11.5	6	M4 Depth 5	M5	8	16	2	19	0.5	11.5	Rc1/8	91	6	4	5	8.5	4.5	12	6
LML-□-20-□-H	70	30	66	20	24.5	13.5	12	6	M5 Depth 6	M5	8	16	2.5	19	0.5	11.5	Rc1/8	98	6.5	-	-	8.5	4.5	15.5	6
LML-□-25-□-H	75	30	75	20	29	16	10	6	M6 Depth 7	M5	8	16	0.5	19	0.5	11.5	Rc1/8	105	6.5	4	7	10	5.5	19	7
LML-□-30-□-H	82	30	88	25	35.5	20.5	12	6.5	M6 Depth 9	M5	8	16	2.5	19	1	12	Rc1/8	117	8.5	3	7	10	5.5	25.5	9
LML-□-35-□-H	90	40	102	30	40	22	12	7	M8 Depth 9	M5	8	16	2.5	19	1.5	12.5	Rc1/8	130	9.5	7	9	13	7.5	30	10

*1: h dimension is determined by the guide used. Please refer to the relevant catalog, etc.
 *2: U and V dimensions are only for HSR/SHS-R/LR (made by THK CO., LTD.) and MHD(G)/LWHD(G) (made by NIPPON THOMPSON CO., LTD.) types.

Dimensional Drawings

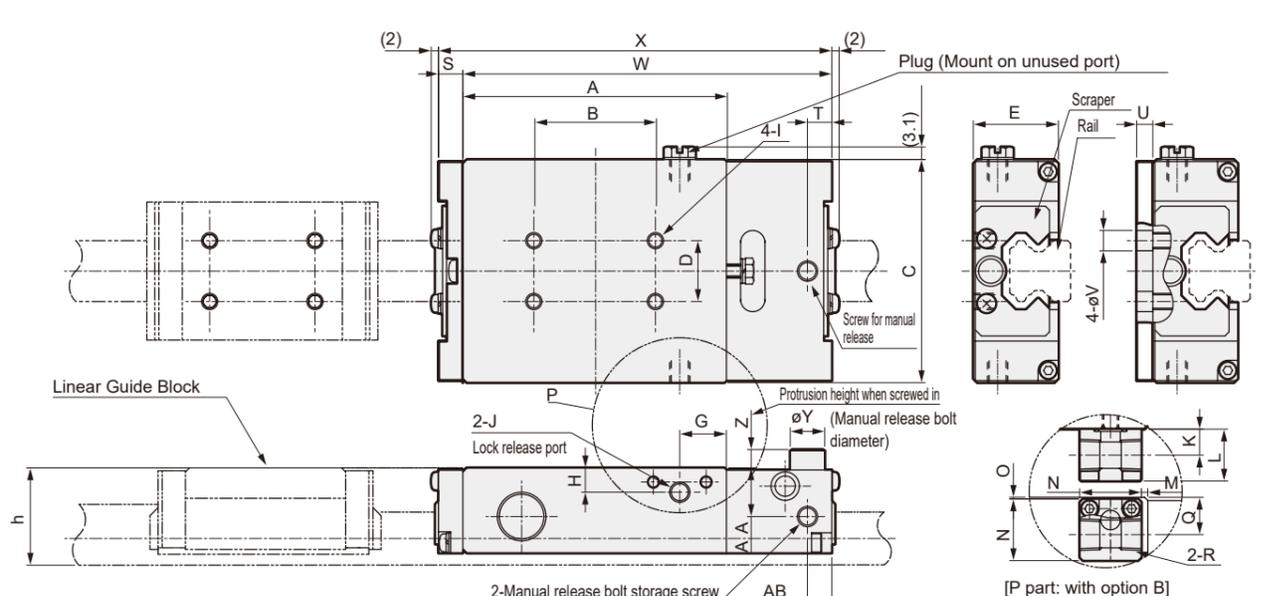
● With scraper, without manual release



Model No.	A	B	C	D	E	G	H	I	J	K	L	M	N	O	Q	R	S	U	V
LML-G-□-15	77	30	55	15	21	11.5	6	M4 Depth 5	M5	8	16	2	19	0.5	11.5	Rc1/8	6	4	5
LML-G-□-20	82	30	66	20	24.5	12	6	M5 Depth 6	M5	8	16	2.5	19	0.5	11.5	Rc1/8	6	-	-
LML-G-□-25	87	30	75	20	29	10	6	M6 Depth 7	M5	8	16	0.5	19	0.5	11.5	Rc1/8	6	4	7
LML-G-□-30	100	30	88	25	35.5	12	6.5	M6 Depth 9	M5	8	16	2.5	19	1	12	Rc1/8	9	3	7
LML-G-□-35	108	40	102	30	40	12	7	M8 Depth 9	M5	8	16	2.5	19	1.5	12.5	Rc1/8	9	7	9

*1: h dimension is determined by the guide used. Please refer to the relevant catalog, etc.
 *2: U and V dimensions are only for HSR/SHS-R/LR (made by THK CO., LTD.) and MHD(G)/LWHD(G) (made by NIPPON THOMPSON CO., LTD.) types.

● With scraper and manual release



Model No.	A	B	C	D	E	G	H	I	J	K	L	M	N	O	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
LML-G-□-15-□-H	65	30	55	15	21	11.5	6	M4 Depth 5	M5	8	16	2	19	0.5	11.5	Rc1/8	6	6	4	5	91	97	8.5	4.5	12	6
LML-G-□-20-□-H	70	30	66	20	24.5	12	6	M5 Depth 6	M5	8	16	2.5	19	0.5	11.5	Rc1/8	6	6.5	-	-	98	104	8.5	4.5	15.5	6
LML-G-□-25-□-H	75	30	75	20	29	10	6	M6 Depth 7	M5	8	16	0.5	19	0.5	11.5	Rc1/8	6	6.5	4	7	105	111	10	5.5	19	7
LML-G-□-30-□-H	82	30	88	25	35.5	12	6.5	M6 Depth 9	M5	8	16	2.5	19	1	12	Rc1/8	9	8.5	3	7	117	126	10	5.5	25.5	9
LML-G-□-35-□-H	90	40	102	30	40	12	7	M8 Depth 9	M5	8	16	2.5	19	1.5	12.5	Rc1/8	9	9.5	7	9	130	139	13	7.5	30	10

*1: h dimension is determined by the guide used. Please refer to the relevant catalog, etc.
 *2: U and V dimensions are only for HSR/SHS-R/LR (made by THK CO., LTD.) and MHD(G)/LWHD(G) (made by NIPPON THOMPSON CO., LTD.) types.



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.

MEMO

Individual Precautions: Linear guide lock LML 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.
- The product cannot function as brake (to stop a moving workpiece). When used for fall prevention (holding in a stationary state), please use at 50% or less of the holding force.

During Use

Warning

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

CAUTION

- Be sure to mount LML on rail before operating manual release. Also, as it may cause a malfunction, use the dedicated release bolt included with the product for manual release.

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].