Pneumatic Equipment

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. 808.

Individual Precautions: Linear Slide Cylinder LCM Series

During Design / Selection

1. Common

Caution

■When selecting a cylinder, select according to the "LCM Selection Guide" on P. 46.

■If the cylinder is used in a place exposed to water droplets or oil droplets, a place where there is a risk of corrosion, or a place with a lot of dust, it may cause damage or malfunction, so protect the product with a cover, etc.

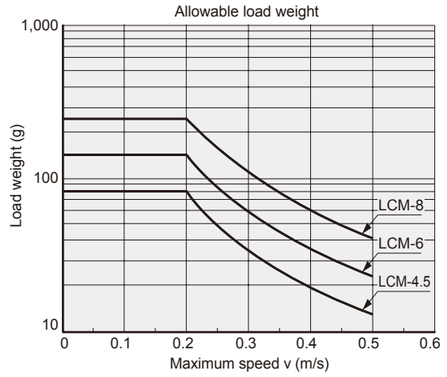
■The main body and slide table are made of stainless steel, but rust may occur depending on the environment. Apply an appropriate amount of anti-rust oil periodically.

■Be aware that the switch may malfunction in environments with surrounding magnetic fields. Also, since magnetic materials around the switch can cause malfunction, when attaching a magnetic workpiece to the slide table, ensure that it does not protrude beyond the table edge on the switch side.

■Be careful as bringing strong magnets, etc., close to this product may magnetize the product and cause the switch to malfunction.

■Use the cylinder below the allowable absorbed energy shown in the table below. If the kinetic energy exceeds this value, consider a separate shock absorber.

Bore size	ø4.5	ø6	ø8
Allowable Absorbed Energy J	1.59×10^{-3}	2.83×10^{-3}	5.02×10^{-3}



During Use

1. Common

Caution

■Apply CGL grease (manufactured by Nippon Thompson Co., Ltd.) to the track rail raceway surface every 6 months or 3 million operating cycles, whichever comes first.

■This cylinder is a non-disassembly type. Do not forcibly disassemble.

■When changing the piping port position, use adhesive for the M3 plug (hexagon socket head set screw). (Recommended adhesive: Loctite 222/221, ThreeBond 1344, or other low-strength adhesives) Also, the tightening amount of the plug should be at an intermediate position where the bolt does not protrude from the port surface and does not hit the bottom of the port hole.

■There are restrictions on usable piping fittings, so please refer to the table below.

Recommended fittings

Bore size	Recommended fitting
All bores	PG-S2-M3
	PG-S2-M3-S
	PG-L2-M3
	FTS4-M3
	FTL4-M3

Note) FTL4-M3 cannot be used for the dust collection port of ø4.5 clean specification. Refer to "For Air Fiber One-touch Fitting No.CC-784".

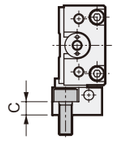
■Do not make dents, scratches, etc. that would impair the flatness of the main body mounting surface and slide table surface. Also, the flatness of the mating part to be included should be 0.02 mm or less. Poor flatness will adversely affect the accuracy of the guide part, increase rolling resistance, and shorten its lifespan.

■Use stepped pins (option) with a clearance fit for the positioning pin holes. Using press-fit dimension pins may damage the guide part due to the load during press-fitting, causing failure. Also, since the pin hole is a through hole, using pins other than stepped pins will cause the pin to interfere with the main body, leading to failure.

■The slide table and end plate are ball-supported, so when fixing a jig with bolts, be sure to hold the slide table and end plate while tightening. If tightened while holding the main body, excessive moment will be applied to the guide part, causing deterioration of the guide part accuracy.

■The bolt screw-in length and tightening torque when attaching jigs to the main body, slide table, and end plate should be the following values.

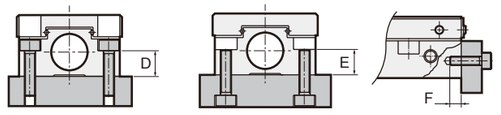
● Main body mounting (Side mounting)



Note Do not use washers, etc. The mounting bolt may hit the guide and cause damage.

Model No.	Bolt used	Max. tightening torque N·m	C mm
LCM-A-4.5	M3x0.5	1.14	5
LCM-A-6	M3x0.5	1.14	5
LCM-A-8	M4x0.7	2.7	4

● Main body mounting

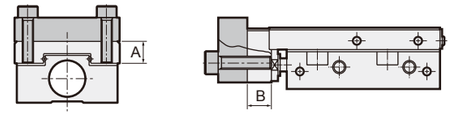


Model No.	Bolt used	Max. tightening torque N·m	D mm
LCM-□-4.5	M2x0.4	0.32	3.5
LCM-□-6	M2.5x0.45	0.65	5
LCM-□-8	M2.5x0.45	0.65	5.5

Model No.	Bolt used	Max. tightening torque N·m	E mm
LCM-□-4.5	M2.5x0.45	0.65	3.5
LCM-□-6	M3x0.5	1.14	5
LCM-□-8	M3x0.5	1.14	5.5

Model No.	Bolt used	Max. tightening torque N·m	Max. screw-in depth F mm
LCM-□-4.5	M2x0.4	0.32	2.5
LCM-□-6	M2.5x0.45	0.65	2.5
LCM-□-8	M3x0.5	1.14	3

● Jig mounting



Model No.	Bolt used	Max. tightening torque N·m	Max. screw-in depth A mm	Max. screw-in depth B mm
LCM-□-4.5	M3x0.5	0.63	4	4.5
LCM-□-6	M3x0.5	0.63	4	5.5
LCM-□-8	M3x0.5	0.63	5	5.5

Note) The length of the workpiece mounting bolt should be less than or equal to the maximum screw-in depth. If it is too long, it will hit the main body and cause damage.

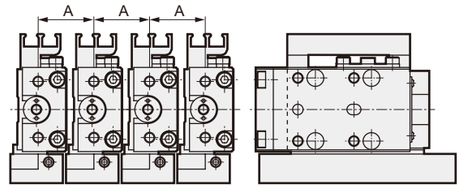
■This cylinder series allows for changes to with-switch models and switch mounting surfaces. The tightening torque for the bolts fixing the switch rail should be the following value. Note that the port on the switch mounting surface cannot be used, so install the plug before assembling the switch rail.

Model No.	Bolt used	Max. tightening torque N·m
LCM-□-4.5	M2x0.4	0.17
LCM-□-6	M2x0.4	0.17
LCM-□-8	M2x0.4	0.17

2. Side mount type

Caution

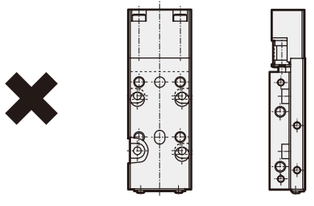
■When mounting side mount types side by side, ensure the mounting interval is greater than or equal to the values in the table below.



Model No.	A mm
LCM-A-4.5	12
LCM-A-6	14
LCM-A-8	16

3. With buffer

■Please note that models with buffers cannot be used in a vertically upward orientation.



For precautions regarding mounting, installation, adjustment, use, and maintenance, please see "Precautions for Use" in this catalog and the CKD Components Product website (https://www.ckd.co.jp/kiki/en/) → "Model No." → Instruction Manual.