



Pneumatic components

Safety precautions

Always read this section before starting use.
Refer to Intro 67 for general precautions.

Linear slide cylinder LCM Series

Design & Selection

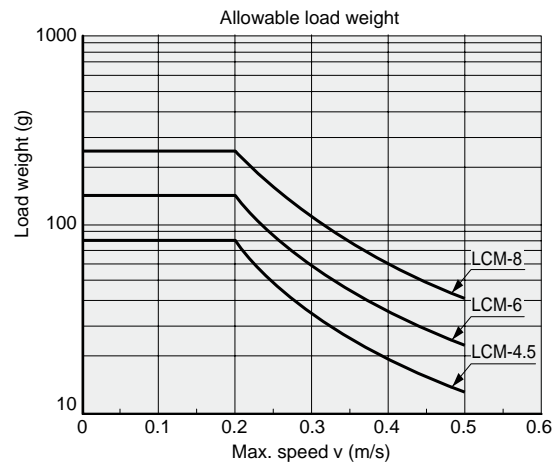
1. Common

CAUTION

- Refer to the LCM Selection Guide on pages 1816 to 1817 when selecting the cylinder.
- When using the cylinder where it could be subject to water or oil exposure, where it could corrode, or where high levels of dust are present, the cylinder could be damaged or malfunction. Protect the product with a cover.
- Stainless steel is used for the body and slide table, but rust could form depending on the environment. Regularly apply an anticorrosion agent.
- The switch could malfunction if used in an environment including magnetic fields. Magnetic sources around the switch could also cause malfunction. When attaching a magnetic workpiece to the slide table, check that the workpiece does not extend toward the switch from the end of the table.
- Exposing this product to a powerful magnet could magnetize the product and cause the switch to malfunction.

- Use the cylinder with the tolerable absorption or less shown below. If dynamic energy exceeds this value, consider using a separate shock absorber.

Bore size	φ 4.5	φ 6	φ 8
Allowable energy absorption J	1.59×10^{-3}	2.83×10^{-3}	5.02×10^{-3}



Installation & Adjustment

1. Common: Piping

- When changing a piping port position, apply adhesive to M3 plug (hexagon socket head set screw). (Low intensity adhesive such as LOCTITE 222/221, ThreeBond1344 recommended)
Tighten the plug to where the bolt does not protrude from the port or contact the base of the port hole.
- Applicable piping joints are limited, so refer to the below table.

Recommended joints

Bore size	Recommended joints
All bore sizes	PG-S2-M3
	PG-S2-M3-S
	PG-L2-M3
	FTS4-M3
	FTL4-M3

Note: FTL4-M3 cannot be used for the φ 4.5 clean specification dust collector port.
Refer to "Components for Air Fiber Push In Joint No. CC-784"

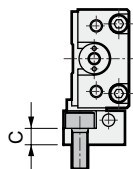
- Avoid denting or scratches that could obstruct the parallelism of the cylinder installation face or slide table face. Maintain parallelism of the installation mate at 0.02 mm or less. If parallelism is poor, guide section accuracy could decrease, rolling resistance could increase, and product life could be adversely affected.
- Use a loose-fitting stepped pin (option) for positioning. A press-fit dimension pin could damage the guide due to the load in press-fitting and result in faults. The pin hole is a through hole so if a pin other than a stepped pin is used, the pin could interfere and result in faults.
- The slide table and end plate are supported by balls. When fixing the jig with bolts, support the slide table and end plate before tightening. If held and tightened, excessive moment on the guide could decrease guide selection accuracy.

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Installation & Adjustment

■ When installing a jig guide, slide table, or end plate, observe the following values for bolt screw depth and tightening torque.

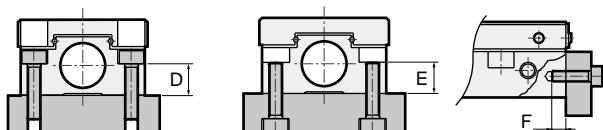
● Cylinder installation (side installation)



Do not use the washer, etc. The installation bolt could contact the guide and break.

Model no.	Applicable bolts	Max. tightening torque N · m	C mm
LCM-A-4.5	M3 x 0.5	1.14	5
LCM-A-6	M3 x 0.5	1.14	5
LCM-A-8	M4 x 0.7	2.7	4

● Cylinder installation

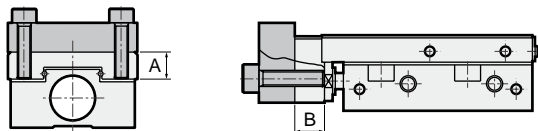


Model no.	Applicable bolts	Max. tightening torque N · m	D mm
LCM-*4.5	M2 x 0.4	0.32	3.5
LCM-*6	M2.5 x 0.45	0.65	5
LCM-*8	M2.5 x 0.45	0.65	5.5

Model no.	Applicable bolts	Max. tightening torque N · m	E mm
LCM-*4.5	M2.5 x 0.45	0.65	3.5
LCM-*6	M3 x 0.5	1.14	5
LCM-*8	M3 x 0.5	1.14	5.5

Model no.	Applicable bolts	Max. tightening torque N · m	Max. screw depth F mm
LCM-*4.5	M2 x 0.4	0.32	2.5
LCM-*6	M2.5 x 0.45	0.65	2.5
LCM-*8	M3 x 0.5	1.14	3

● Jig installation



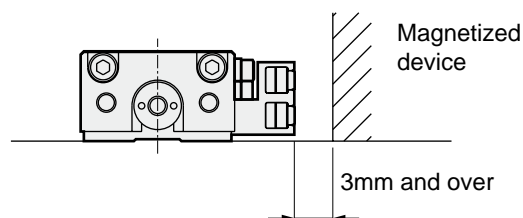
Model no.	Applicable bolts	Max. tightening torque N · m	Max. screw depth A mm	Max. screw depth B mm
LCM-*4.5	M3 x 0.5	0.63	4	4.5
LCM-*6	M3 x 0.5	0.63	4	5.5
LCM-*8	M3 x 0.5	0.63	5	5.5

Note: The work installation bolt must be shorter than the maximum screw depth. If it is too long, it could contact the body and break.

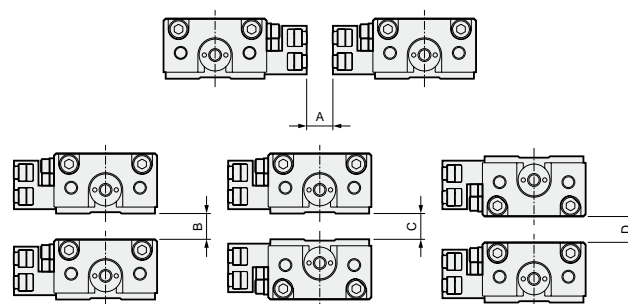
■ This cylinder switch can be changed to one with a switch and the switch installation face can be changed. The tightening torque of the bolt fixing the switch rail is given below. The switch installation face port is not used, so attach a plug before assembling the switch rail.

Model no.	Applicable bolts	Max. tightening torque N · m
LCM-*4.5	M2 x 0.4	0.17
LCM-*6	M2 x 0.4	0.17
LCM-*8	M2 x 0.4	0.17

■ Sources of magnetism such as steel plates near the cylinder switch could cause the cylinder to malfunction. Keep at least 3 mm from the switch rail. (Same clearance for all bore sizes)



■ If the cylinders with switches are installed adjacently, the cylinder switch could malfunction. Always separate A, B, C and D by 3mm or more. (Same clearance for all bore sizes)



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Linear slide cylinder
Combined functions

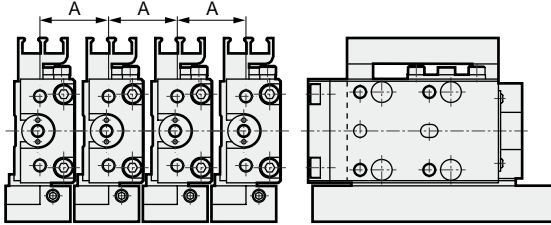
- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM**
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

Installation & Adjustment

2. Side installation type

⚠ CAUTION

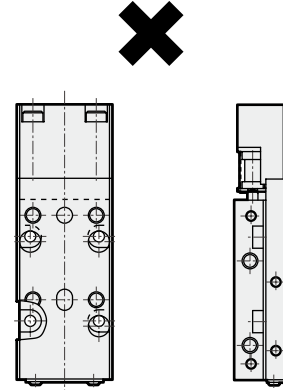
■ Interval larger than dimensions listed on the table below must be maintained if the side installation type is installed in parallel.



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

3. With buffer

■ Care must be taken as the product can not be installed vertically if of the type with a buffer.



During Use & Maintenance

⚠ CAUTION

■ Apply CGL grease (Nippon Thompson) to the track rail's tracks of the guide after six months of use or 3,000,000 operations, whichever is sooner.