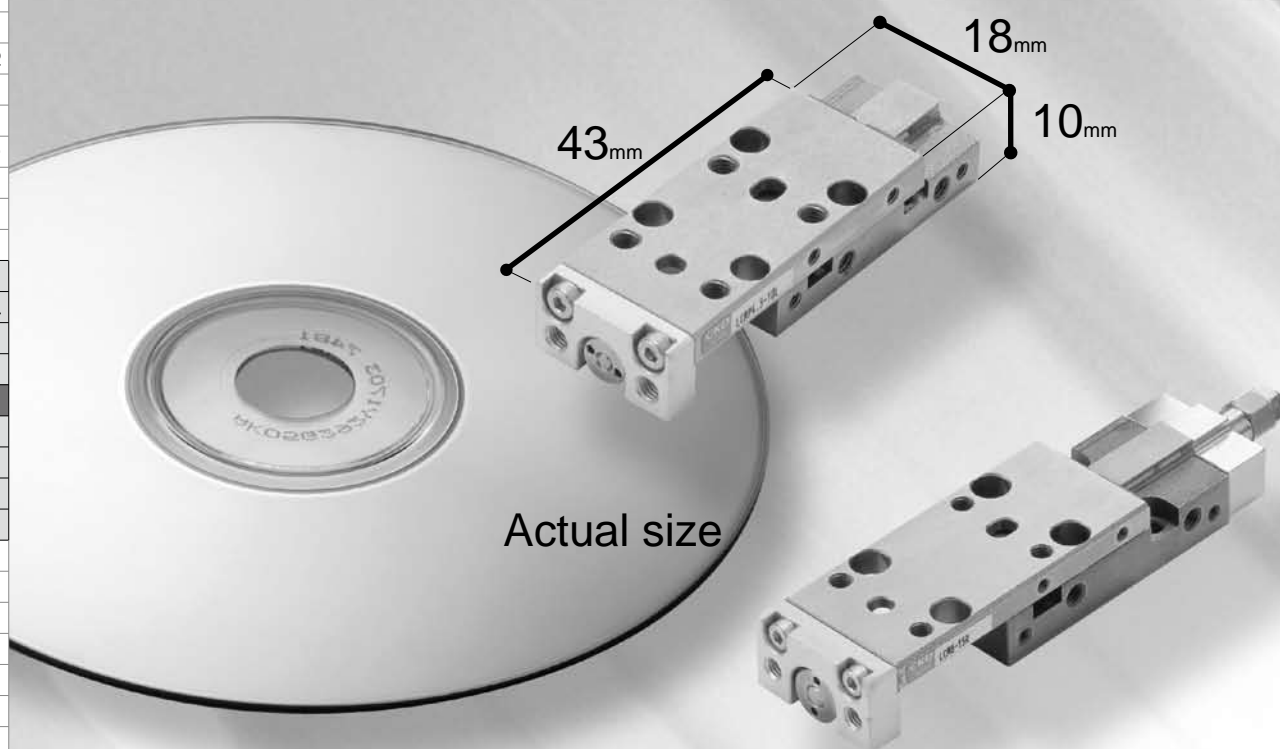


SCP*2
 CMK2
 CMA2
 SCM
 SCG
 SCA2
 SCS
 CKV2
 CA/OV2
 SSD
 CAT
 MDC2
 MVC
 SMD2
 MSD*
 FC*
 STK
 ULK*
 JSK/M2
 JSG
 JSC3
 USSD
 USC
 JSB3
 LMB
 STG
 STS/L
 LCS
 LCG
 LCM
 LCT
 LCY
 STR2
 UCA2
 HCM
 HCA
 SRL2
 SRG
 SRM
 SRT
 MRL2
 MRG2
 SM-25
 CAC3
 UCAC
 RCC2
 MFC
 SHC
 GLC
 Ending

Compact/highly accurate actuator

Highly compact, accurate, and rigid LCM Series linear slide.
 ($\phi 4.5 / \phi 6 / \phi 8$)



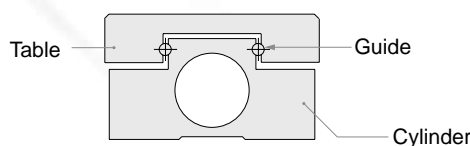
● Ideal for high-accuracy positioning

Highly accurate 0.005 mm sliding parallelism and 0.03 mm installation parallelism are ensured, making this actuator ideal for positioning.

Sliding parallelism **0.005mm**
 0.03mm Installation parallelism

● Ultimate pursuit of downsizing

The cylinder, linear guide, and slide table have been integrated into a highly compact unit.



Linear Slide Cylinder

LCM Series

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

Compatible with small spaces

This cylinder can be installed even in compact spacing, making layout more flexible.

Workpiece installation on either of two faces

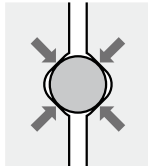
The workpiece can be directly installed either on the table top or front using the installation holes provided.

Highly reliable stainless steel parts

Corrosion-resistant stainless steel is used for the cylinder and slide table.

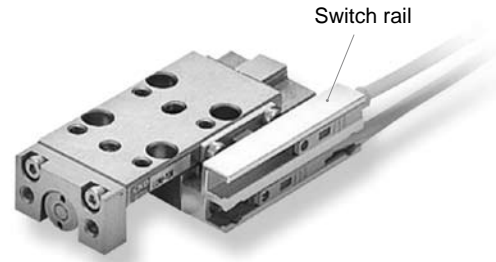
Powerful design

A linear guide with contacts at four points enables this cylinder to be used with loads in different directions.



2 color switch mountable

The 2 color indicator type has been added for mounting onto the F-type miniature switch.



Wide variation

Available variations include adjustable stroke, side installation, and clean room specifications.

RoHS directive complied

Substances adversely affecting the environment, including lead and hexavalent chromium, have been eliminated.

RoHS

LCM Series products

Series variation	Bore size	Stroke length (mm)			
		5	10	15	20
Double acting single rod type	<ul style="list-style-type: none"> φ 4.5 φ 6 φ 8 	●	●	●	●
Double acting stroke adjustable type (extended)	<ul style="list-style-type: none"> φ 4.5 φ 6 φ 8 	●	●	●	●
Double acting stroke adjustable type (extended/retracted)	<ul style="list-style-type: none"> φ 4.5 φ 6 φ 8 	●	●	●	●
Double acting side installation type	<ul style="list-style-type: none"> φ 4.5 φ 6 φ 8 	●	●	●	●
Double acting single rod type clean room specifications	<ul style="list-style-type: none"> φ 4.5 φ 6 φ 8 	●	●	●	●

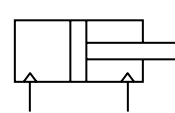
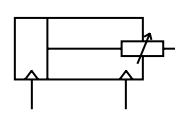
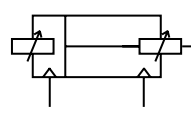
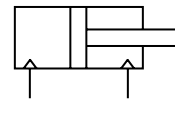
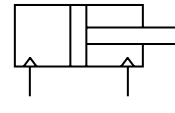
Ending

Linear slide cylinder
Combined functions

Series variation

Linear slide cylinder LCM Series

● : Standard ◎ : Option ■ : Not available

Variation	Model no. JIS symbol	Bore size (mm)	Standard stroke length (mm)				Option				Switch	Page
			5	10	15	20	With buffer	With magnet	Magnet + with switch rail	Dowel pin attached		
			●	●	■	■	B	M	F	J*		
Double acting single rod type		φ 4.5	●	●	■	■						1770
		φ 6	●	●	●	■	◎	◎	◎	◎	◎	
		φ 8	●	●	●	●						
Double acting stroke adjustable type (extended)		φ 4.5	●	●	■	■						1780
		φ 6	●	●	●	■	◎	◎	◎	◎	◎	
		φ 8	●	●	●	●						
Double acting stroke adjustable type (extended/retracted)		φ 4.5	●	●	■	■						1788
		φ 6	●	●	●	■	◎	◎	◎	◎	◎	
		φ 8	●	●	●	●						
Double acting side installation type		φ 4.5	●	●	■	■						1796
		φ 6	●	●	●	■	◎	◎	◎	◎	◎	
		φ 8	●	●	●	●						
Double acting single rod type clean room specifications		φ 4.5	●	●	■	■	■					1808
		φ 6	●	●	●	■		◎	◎	◎	◎	
		φ 8	●	●	●	●						

Note: Custom stroke length is not available.

- 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

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
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- MSD*
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- LMB
- STG
- STS/L
- LCS
- LCG
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- HCA
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- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

Linear slide cylinder
Combined functions



Safety precautions

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

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

Linear slide cylinder LCM Series

Design & Selection

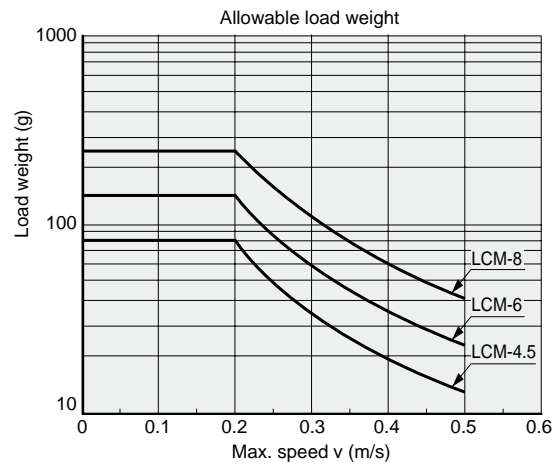
1. Common

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

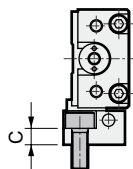
Note: FTL4-M3 cannot be used for the φ 4.5 clean specification dust collector port.
Refer to "Components for Air Fiber Push In Joint No. CC-784"

- 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.

Installation & Adjustment

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

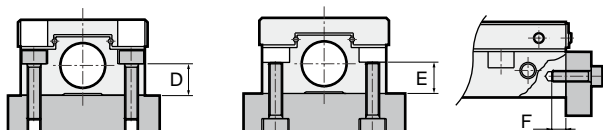
- Cylinder installation (side installation)



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

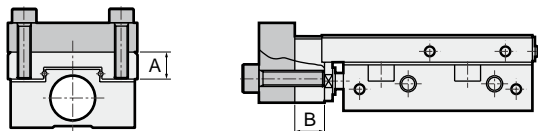


Model no.	Applicable bolts	Max. tightening torque N · m	D mm
LCM-*4.5	M2 x 0.4	0.32	3.5
LCM-*6	M2.5 x 0.45	0.65	5
LCM-*8	M2.5 x 0.45	0.65	5.5

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



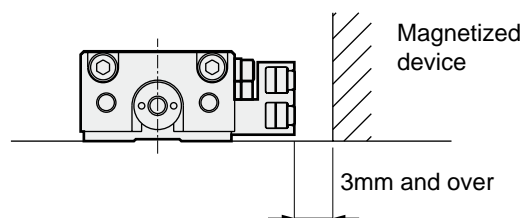
Model no.	Applicable bolts	Max. tightening torque N · m	Max. screw depth A mm	Max. screw depth B mm
LCM-*4.5	M3 x 0.5	0.63	4	4.5
LCM-*6	M3 x 0.5	0.63	4	5.5
LCM-*8	M3 x 0.5	0.63	5	5.5

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.

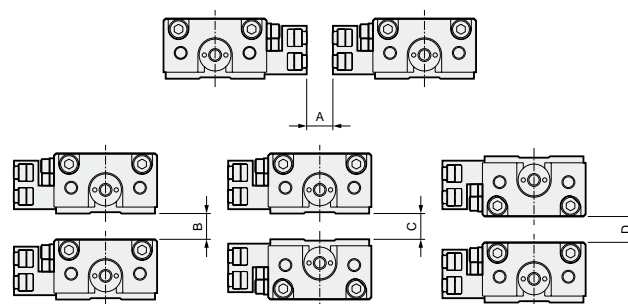
■ This cylinder switch can be changed to one with a switch and the switch installation face can be changed. The tightening torque of the bolt fixing the switch rail is given below. The switch installation face port is not used, so attach a plug before assembling the switch rail.

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

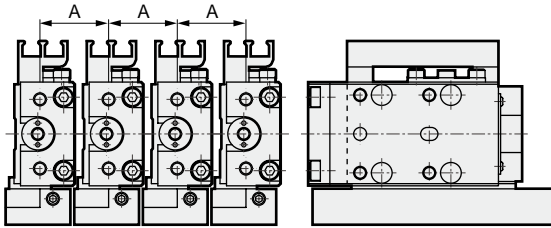
- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM**
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC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

Installation & Adjustment

2. Side installation type

⚠ CAUTION

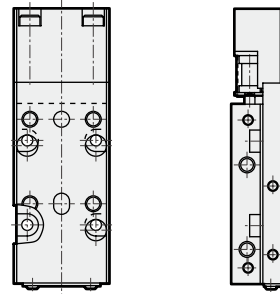
■ Interval larger than dimensions listed on the table below must be maintained if the side installation type is installed in parallel.



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

3. With buffer

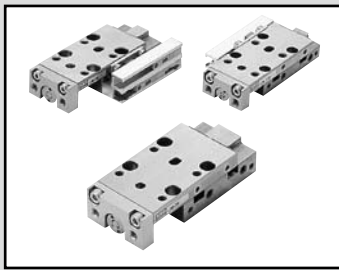
■ Care must be taken as the product can not be installed vertically if of the type with a buffer.



During Use & Maintenance

⚠ CAUTION

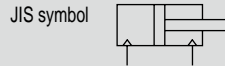
■ Apply CGL grease (Nippon Thompson) to the track rail's tracks of the guide after six months of use or 3,000,000 operations, whichever is sooner.



Linear slide cylinder Double acting single rod type

LCM Series

● Bore size: ϕ 4.5, ϕ 6, ϕ 8



Specifications

Descriptions		LCM		
Bore size	mm	ϕ 4.5	ϕ 6	ϕ 8
Actuation		Double acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7		
Min. working pressure	MPa	0.2		0.15
Withstanding pressure	MPa	1.05		
Ambient temperature	°C	0 to 60		
Port size		M3		
Stroke tolerance	mm	+1.0 0		
Working piston speed	mm/s	30 to 500		
Cushion		None	Rubber cushioned	
Lubrication		Not required (when lubricating, use turbine oil Class 1 ISOVG 32)		
Allowable energy absorption	J	Refer to the table on Page 1766.		

Specifications with buffer

Descriptions		LCM-**-**-B	
Buffer stroke	mm	4 (Max.)	
Buffer section spring load	When set	N	0.3
	Operation	N	0.7

Stroke length

Bore size (mm)	Standard stroke length (mm)	Min. stroke length with switch (mm)
ϕ 4.5	5, 10	5
ϕ 6	5, 10, 15	
ϕ 8	5, 10, 15, 20	

Note 1: Other than standard stroke length is not available.

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

Switch specifications

Descriptions	Proximity 2 wire		Proximity 3 wire	
	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay	
Output method	-		NPN output	
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20 mA		100 mA or less	50 mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1 mA or less		10 µA or less	

Note 1: The maximum load current 20mA is applied at 25°C. The current will be lower than 20mA if ambient temperature around switch is higher than 25°C. (5 to 10mA at 60°C.)

Cylinder weight

Unit: g

Stroke length (mm)	5		10		15		20		Additional weight	
	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	With buffer	Weight per switch
φ 4.5	42	46	42	46	-	-	-	-	3	10
φ 6	58	63	58	63	66	72	-	-	4	10
φ 8	83	88	83	88	104	110	104	110	5	10

Theoretical thrust table

Unit: N

Bore size (mm)	Operating direction	Working pressure MPa					
		0.2	0.3	0.4	0.5	0.6	0.7
φ 4.5	Push	3.2	4.8	6.4	8.0	9.5	11.1
	Pull	2.6	3.8	5.1	6.4	7.7	9.0
φ 6	Push	5.6	8.5	11.3	14.1	16.9	19.7
	Pull	4.2	6.4	8.5	10.6	12.7	14.8
φ 8	Push	10.1	15.1	20.1	25.2	30.2	35.2
	Pull	8.6	13.0	17.3	21.6	25.9	30.2

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

How to order

● Without switch

LCM - 6 - 10 - R ————— **J2**

● With switch

LCM - 6 - 10 - R - F2H - R - J2

A Bore size

B Stroke length

C Piping direction

D Switch model no.

E Switch quantity

F Option

Symbol	Descriptions
A Bore size (mm)	
4.5	φ 4.5
6	φ 6
8	φ 8

B Stroke length (mm)		Bore size		
		φ 4.5	φ 6	φ 8
5	5	●	●	●
10	10	●	●	●
15	15	-	●	●
20	20	-	-	●

C Piping direction	
R	Right viewed from rod end
L	Left viewed from rod end

D Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
F2H*	F2V*	Proximity	1 color indicator type	2-wire
F3H*	F3V*			3-wire
F2YH*	F2YV*		2 color indicator type	2-wire
F3YH*	F3YV*			3-wire

*Lead wire length	
Blank	1 m (standard)
3	3 m (option)

E Switch quantity	
R	One on rod end
H	One on head end
D	Two

F Option	
B	With buffer
M Note 1	With magnet
F1 Note 1, 2	Magnet + switch rail (switch groove 1 pc.)
F2 Note 1	Magnet + switch rail (switch groove 2 pcs.)
J*	Dowel pin attached (* ... pin number)

⚠ Caution for model no. selection

Note 1: Selection not required when designating the switch type.

Note 2: Available only for φ 4.5.

<Example of model number>

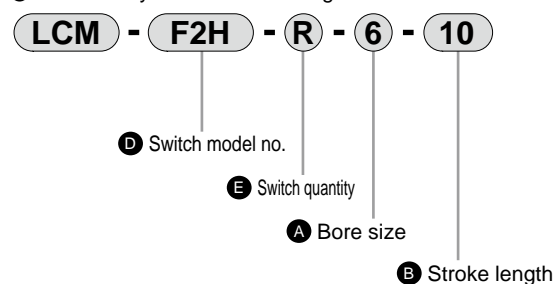
LCM-6-10-R-F2H-R-J2

Model: Linear slide cylinder, double acting

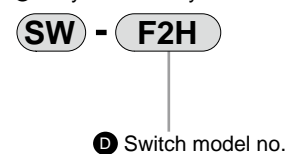
- A** Bore size: φ 6 mm
- B** Stroke length: 10 mm
- C** Piping direction: Right viewed from rod end
- D** Switch model no.: Proximity switch F2H, lead wire 1m
- E** Switch quantity: One on rod end
- F** Option: Dowel pin attached (2 pcs.)

How to order switch

- Switch body + switch rail + magnet

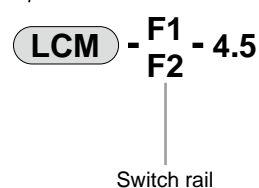


- Only switch body

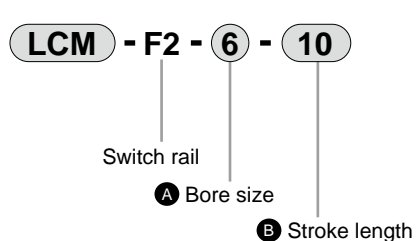


- Only switch rail

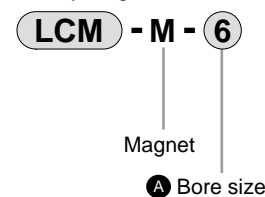
- ϕ 4.5



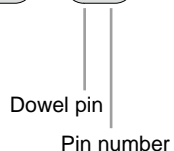
- ϕ 6, ϕ 8



- Only magnet



How to order dowel pin

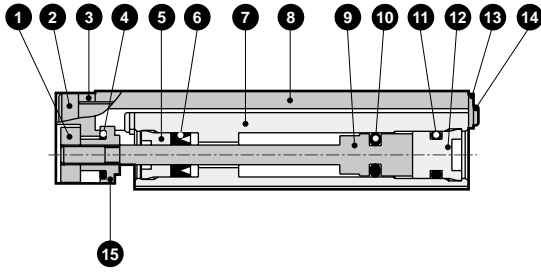


SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

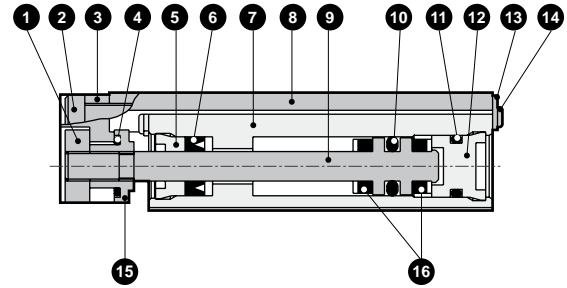
Linear slide cylinder
Combined functions

Internal structure and parts list

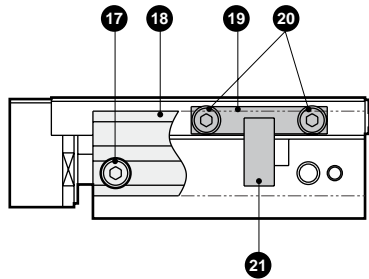
● LCM-4,5



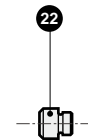
● LCM-6, 8



● LCM-4.5 to 8 with magnet/switch rail



• Dowel pin

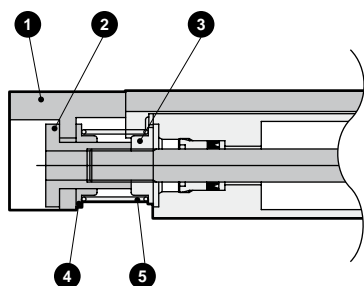


Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Floating bush A	Stainless steel		12	Guard	Acetar resin	
2	Bolt	Stainless steel		13	Stop plate	Stainless steel	
3	End plate	Aluminum alloy		14	Machine screw	Stainless steel	
4	O ring	Nitrile rubber		15	Floating bush B	Stainless steel	
5	Rod cover	Acetar resin		16	Cushion rubber	Urethane rubber (φ 6, φ 8)	
6	Rod packing seal	Nitrile rubber		17	Hexagon socket head cap bolt	Stainless steel	
7	Cylinder body	Stainless steel		18	Switch rail	Aluminum alloy	
8	Slide table	Stainless steel		19	Plate	Aluminum alloy	
9	Piston	Stainless steel		20	Hexagon socket head cap bolt	Stainless steel	
10	Piston packing seal	Nitrile rubber		21	Magnet	Plastic	
11	O ring	Nitrile rubber		22	Dowel pin	Steel	

Internal structure and parts list

● LCM-4.5 to 8 with buffer



Parts list

No.	Parts name	Material	Remarks
1	End plate	Aluminum alloy	
2	Floating bush A	Stainless steel	
3	Floating bush B	Stainless steel	
4	Spring holder	Copper alloy	
5	Coil spring	Stainless steel	

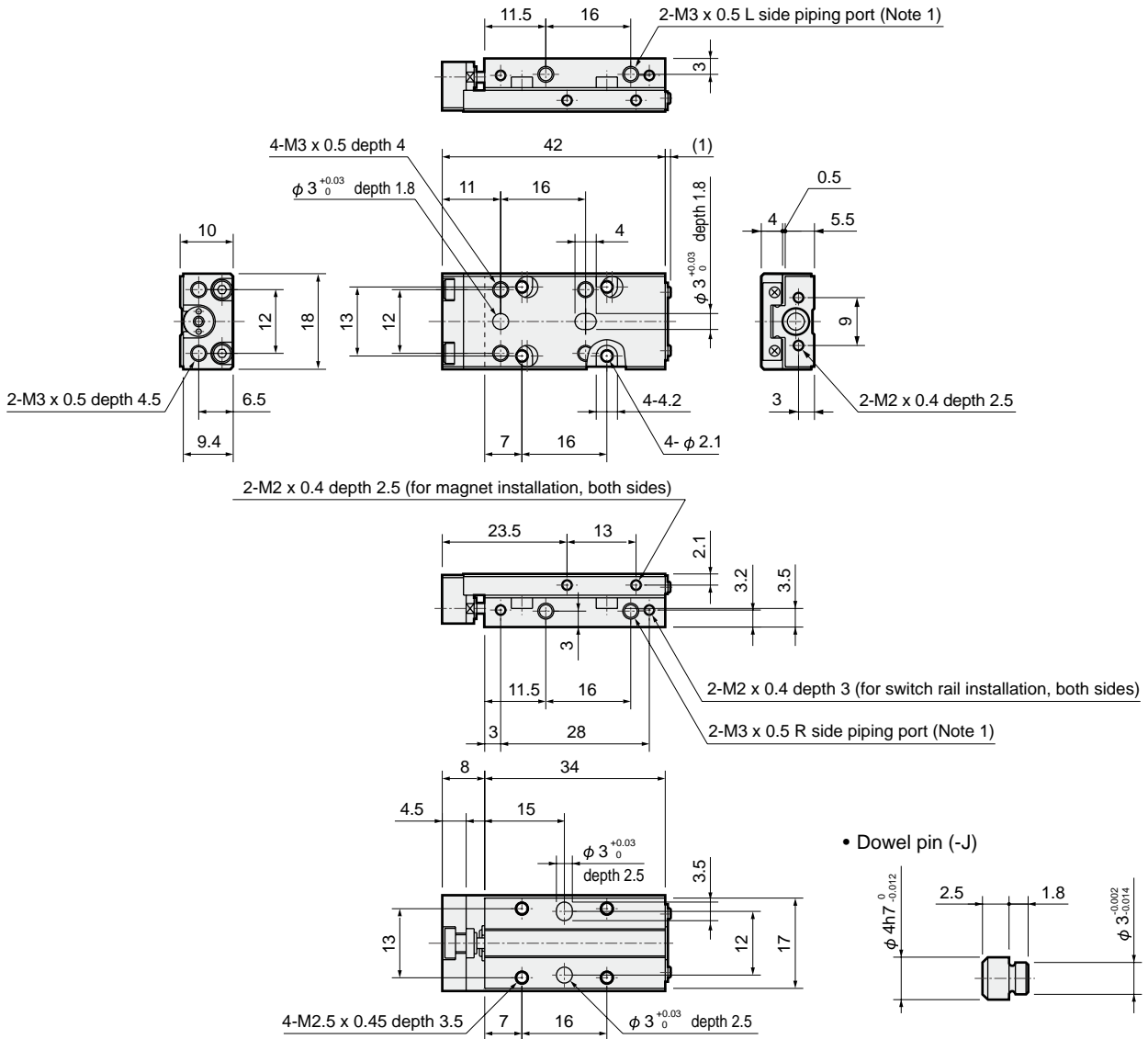
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Linear slide cylinder
Combined functions

Dimensions

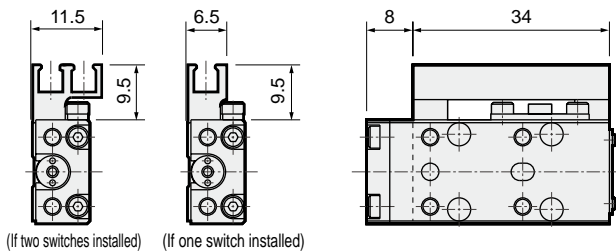


● LCM-4.5

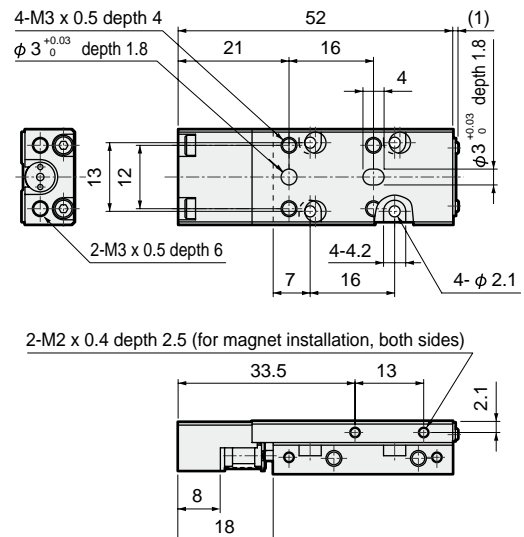


(Note 1) A plug is assembled on the opposite side of piping port indicated in the model no.

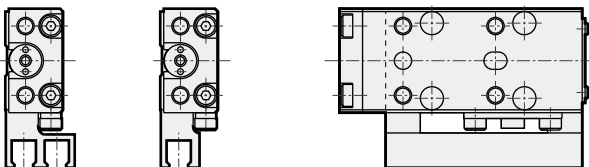
• With magnet/cylinder switch (piping direction: -R)



• With buffer (-B)



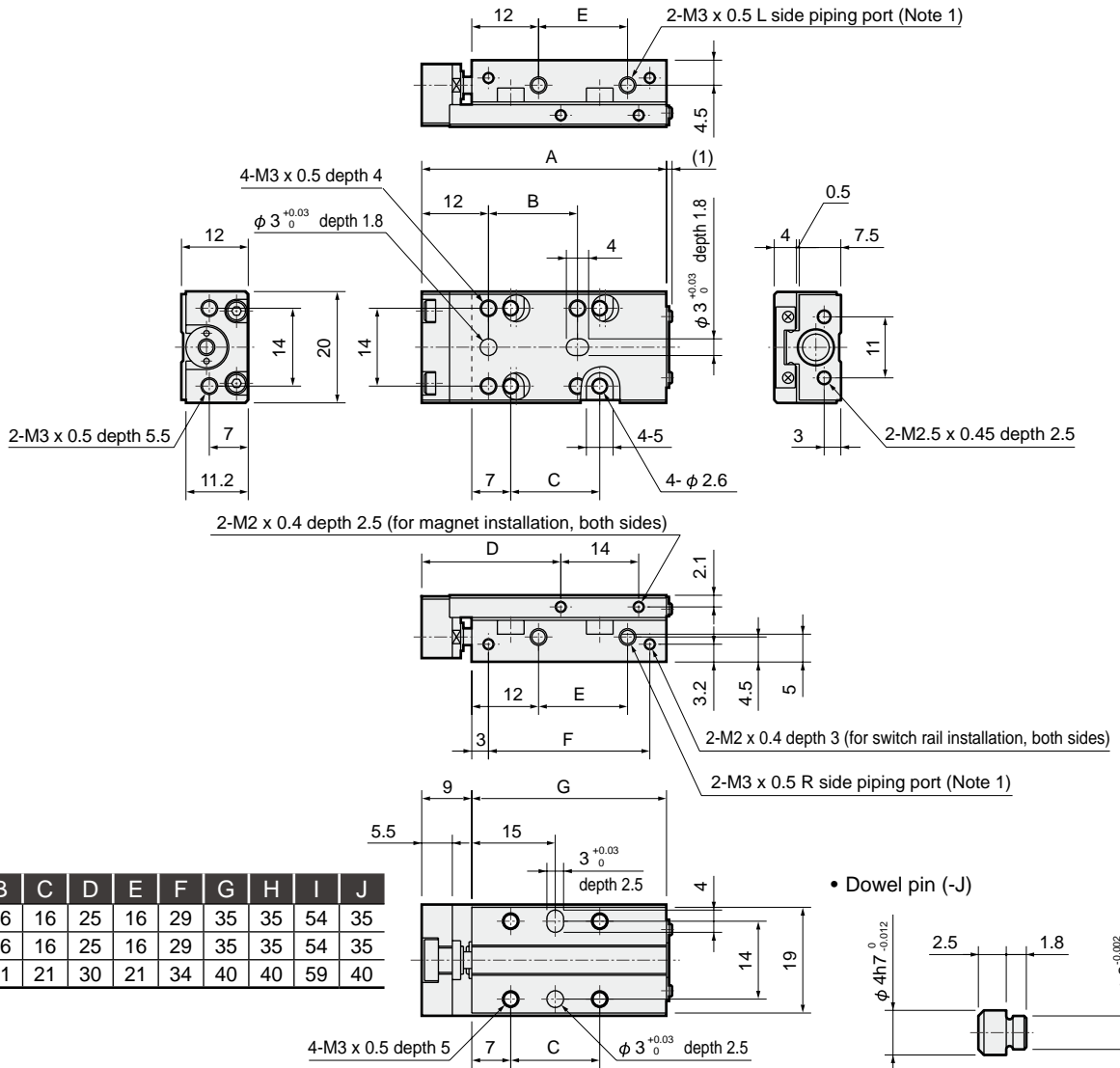
• With magnet/cylinder switch (piping direction: -L)



Note: Refer to Page 1815 for switch installation dimensions.

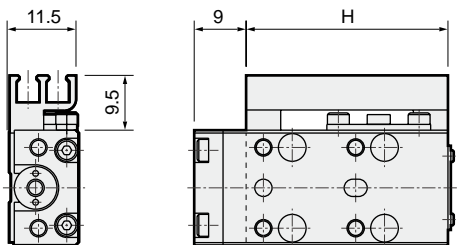
Dimensions

● LCM-6

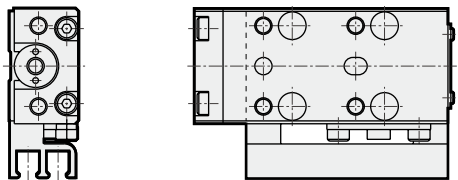


Stroke length	A	B	C	D	E	F	G	H	I	J
5	44	16	16	25	16	29	35	35	54	35
10	44	16	16	25	16	29	35	35	54	35
15	49	21	21	30	21	34	40	40	59	40

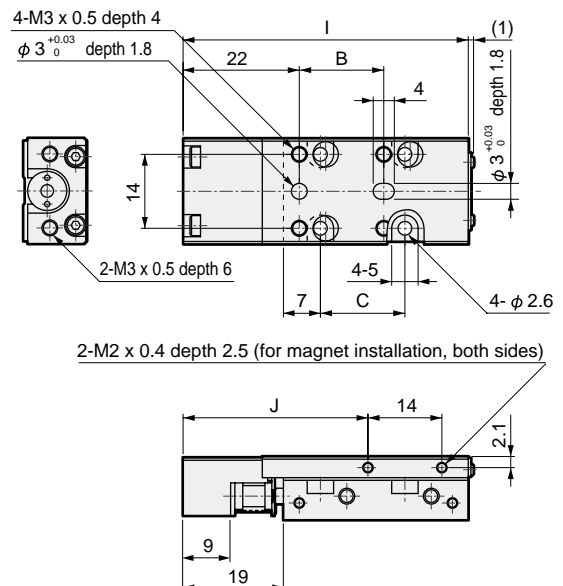
• With magnet/cylinder switch (piping direction: -R)



• With magnet/cylinder switch (piping direction: -L)



• With buffer (-B)



Note: Refer to page 1815 for switch installation dimensions.

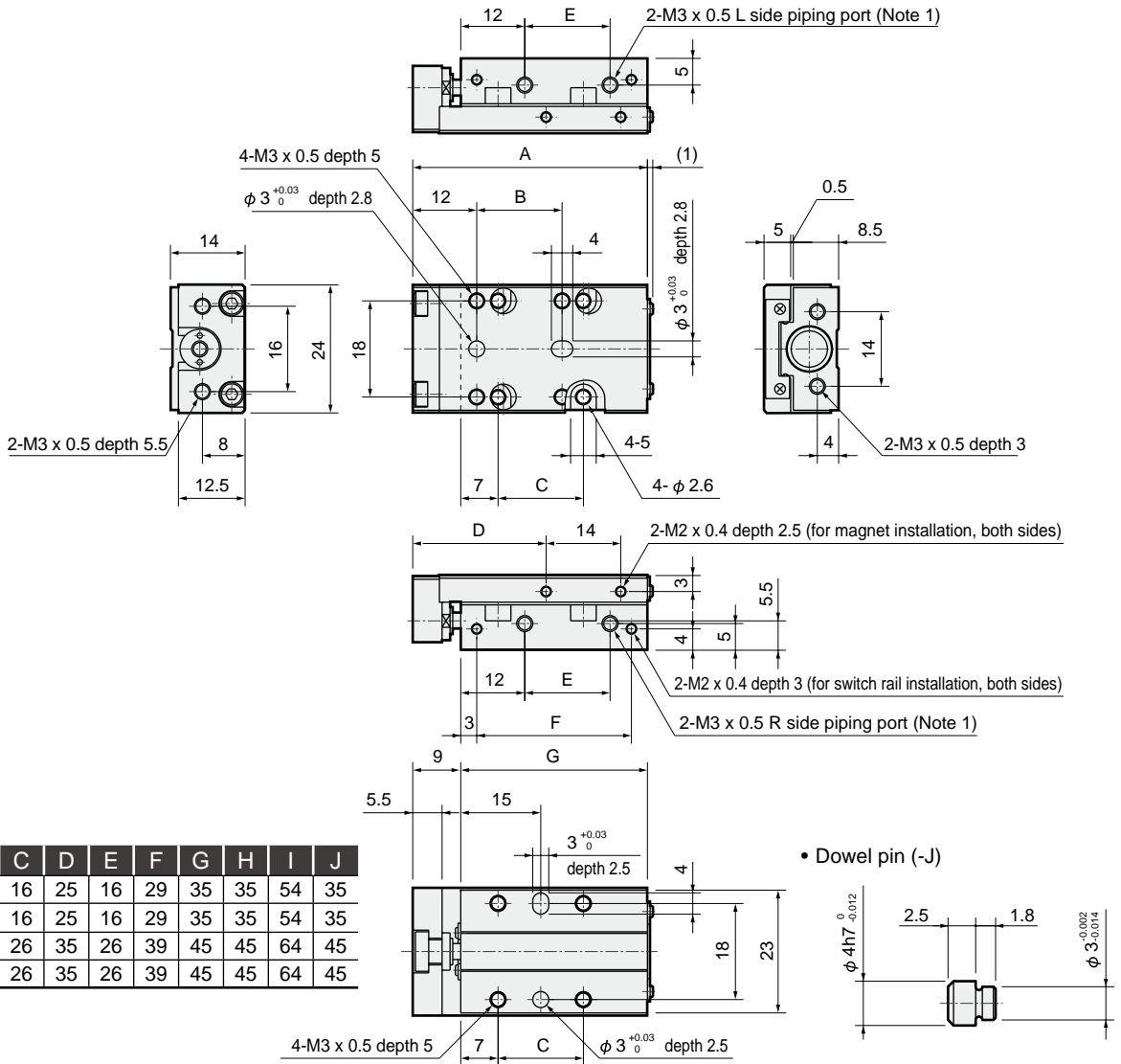
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Linear slide cylinder
Combined functions

Dimensions



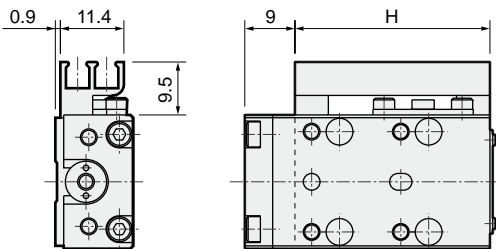
● LCM-8



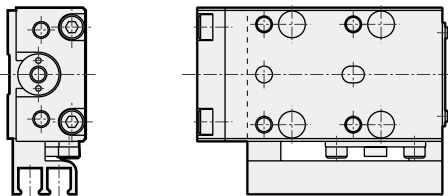
Stroke length	A	B	C	D	E	F	G	H	I	J
5	44	16	16	25	16	29	35	35	54	35
10	44	16	16	25	16	29	35	35	54	35
15	54	26	26	35	26	39	45	45	64	45
20	54	26	26	35	26	39	45	45	64	45

(Note 1) A plug is assembled on the opposite side of piping port indicated in the model no.

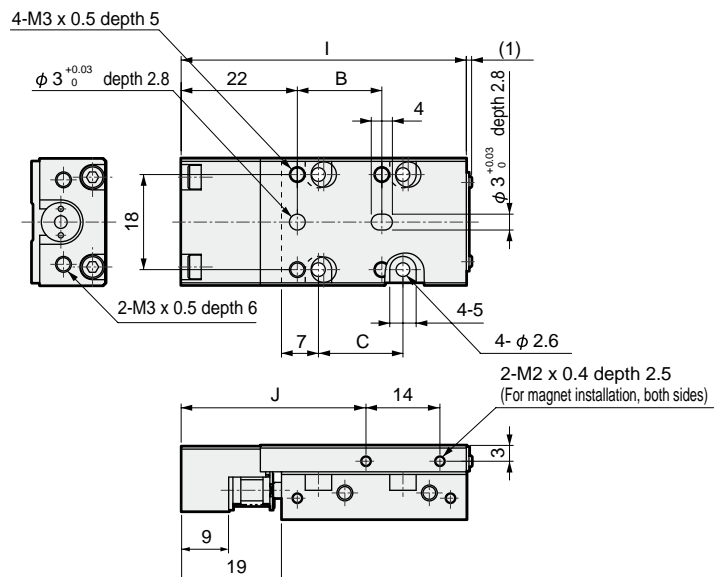
• With magnet/cylinder switch (piping direction: -R)



• With magnet/cylinder switch (piping direction: -L)



• With buffer (-B)



Note: Refer to Page 1815 for switch installation dimensions.

Linear slide cylinder Double acting stroke adjustable type (extended)

LCM-P Series

● Bore size: ϕ 4.5, ϕ 6, ϕ 8



Specifications

Descriptions	LCM-P			
Bore size	mm	ϕ 4.5	ϕ 6	ϕ 8
Actuation		Double acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7		
Min. working pressure	MPa	0.25	0.2	0.15
Withstanding pressure	MPa	1.05		
Ambient temperature	$^{\circ}$ C	0 to 60		
Port size		M3		
Stroke tolerance	mm	+1.0 0		
Working piston speed	mm/s	30 to 500		
Cushion		None		
Lubrication		Not required (when lubricating, use turbine oil Class 1 ISOVG 32)		
Adjustable stroke range	mm	-5 to 0		
Repeatability	mm	\pm 0.02		
Allowable energy absorption	J	Refer to the table on Page 1766.		

Specifications with buffer

Descriptions	LCM-*.*.*.B		
Buffer stroke	mm	4 (Max.)	
Buffer section spring load	Setting	N	0.3
	Operation	N	0.7

Stroke length

Bore size (mm)	Standard stroke length (mm)	Min. stroke length with switch (mm)
ϕ 4.5	5, 10	5
ϕ 6	5, 10, 15	
ϕ 8	5, 10, 15, 20	

Note 1: Other than standard stroke length is not available.

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

Switch specifications

Descriptions	Proximity 2 wire		Proximity 3 wire	
	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay	
Output method	-		NPN output	
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20 mA		100 mA or less	50 mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1 mA or less		10 µA or less	

Note 1: The maximum load current 20mA is applied at 25°C. The current will be lower than 20mA if ambient temperature around switch is higher than 25°C. (5 to 10mA at 60°C)

Cylinder weight

Unit: g

Stroke length (mm)	5		10		15		20		Additional weight	
	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	With buffer	Weight per switch
φ 4.5	49	53	49	53	-	-	-	-	3	10
φ 6	68	73	68	73	77	83	-	-	4	10
φ 8	97	102	97	102	120	126	120	126	5	10

Theoretical thrust table

Unit: N

Bore size (mm)	Working pressure MPa					
	0.2	0.3	0.4	0.5	0.6	0.7
φ 4.5	2.6	3.8	5.1	6.4	7.7	9.0
φ 6	4.2	6.4	8.5	10.6	12.7	14.8
φ 8	8.6	13.0	17.3	21.6	25.9	30.2

- 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

How to order

● Without switch

LCM-P - **6** - **10** - **R** ————— **J2**

● With switch

LCM-P - **6** - **10** - **R** - **F2H** - **R** - **J2**

A Bore size

B Stroke length

C Piping direction

D Switch model no.

E Switch quantity

F Option

Symbol	Descriptions
A Bore size (mm)	
4.5	φ 4.5
6	φ 6
8	φ 8

B Stroke length (mm)		Bore size		
		φ 4.5	φ 6	φ 8
5	5	●	●	●
10	10	●	●	●
15	15	-	●	●
20	20	-	-	●

C Piping direction	
R	Right viewed from rod end
L	Left viewed from rod end

D Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
F2H*	F2V*	Proximity	1 color indicator type	2-wire
F3H*	F3V*			3-wire
F2YH*	F2YV*		2 color indicator type	2-wire
F3YH*	F3YV*			3-wire

*Lead wire length	
Blank	1 m (standard)
3	3 m (option)

E Switch quantity	
R	One on rod end
H	One on head end
D	Two

F Option	
B	With buffer
M Note 1	With magnet
F1 Note 1, 2	Magnet + switch rail (switch groove 1 pc.)
F2 Note 1	Magnet + switch rail (switch groove 2 pcs.)
J*	Dowel pin attached (* ... pin number)

⚠ Caution for model no. selection

Note 1: Selection not required when designating the switch type.

Note 2: Available only for φ 4.5.

<Example of model number>

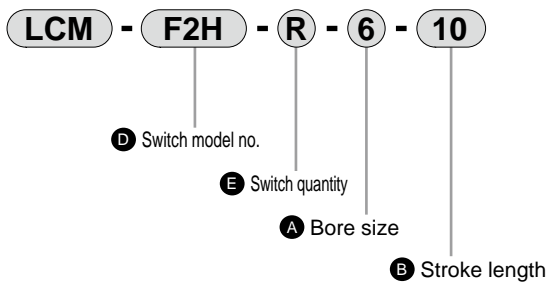
LCM-P-6-10-R-F2H-R-J2

Model: Linear slide cylinder, double acting stroke adjustment type (extended)

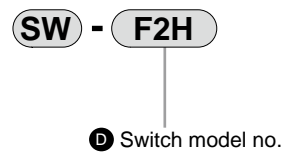
- A** Bore size: φ 6 mm
- B** Stroke length: 10 mm
- C** Piping direction: Right viewed from rod end
- D** Switch model no.: Proximity switch F2H, lead wire 1m
- E** Switch quantity: One on rod end
- F** Option: Dowel pin attached (2 pcs.)

How to order switch

- Switch body + switch rail + magnet

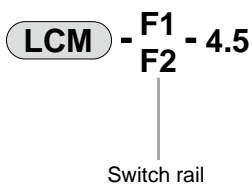


- Only switch body

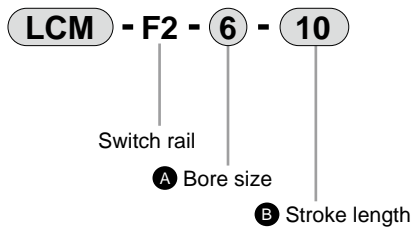


- Only switch rail

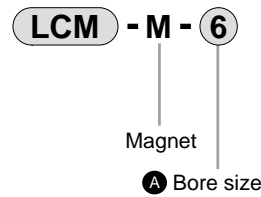
- ϕ 4.5



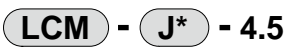
- ϕ 6, ϕ 8



- Only magnet



How to order dowel pin



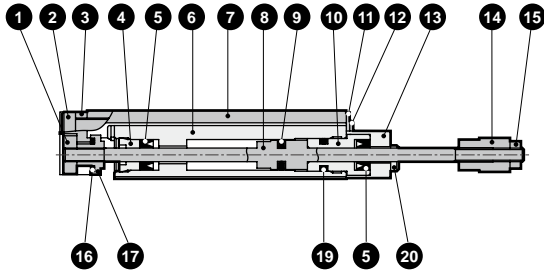
Dowel pin
Pin number

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
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SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

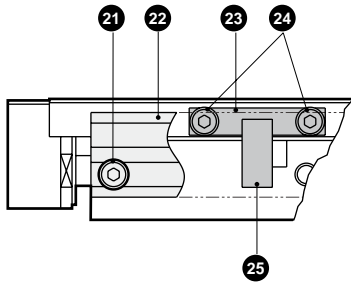
Linear slide cylinder
Combined functions

Internal structure and parts list

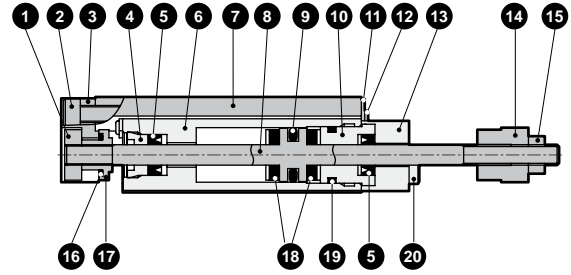
● LCM-P-4.5



● LCM-P-4.5 to 8 with magnet/switch rail



● LCM-P-6, 8



• Dowel pin (-J)



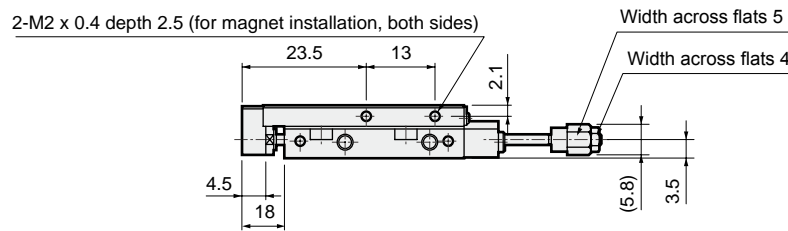
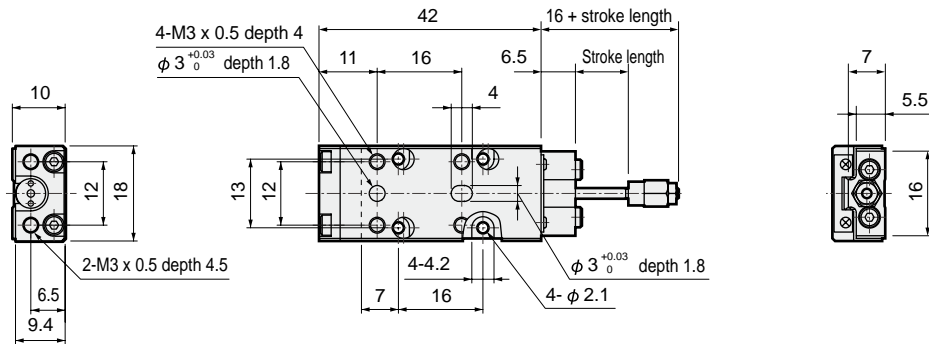
Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Floating bush A	Stainless steel		14	Adjustable stopper	Steel	Nickel plating
2	Bolt	Stainless steel		15	Hexagon nut	φ 4.5 Stainless steel φ 6, φ 8 Steel	Nickel plating
3	End plate	Aluminum alloy		16	O ring	Nitrile rubber	
4	Rod cover	Acetar resin		17	Floating bush B	Stainless steel	
5	Rod packing seal	Nitrile rubber		18	Cushion rubber	Urethane rubber (φ 6, φ 8)	
6	Cylinder body	Stainless steel		19	O ring	Nitrile rubber	
7	Slide table	Stainless steel		20	Hexagon socket head cap bolt	Stainless steel	
8	Piston	Stainless steel		21	Hexagon socket head cap bolt	Stainless steel	
9	Piston packing seal	Nitrile rubber		22	Switch rail	Aluminum alloy	
10	Guard	Aluminum alloy		23	Plate	Aluminum alloy	
11	Stop plate	Stainless steel		24	Hexagon socket head cap bolt	Stainless steel	
12	Machine screw	Stainless steel		25	Magnet	Plastic	
13	Stopper A	Steel	Nickel plating	26	Dowel pin	Steel	

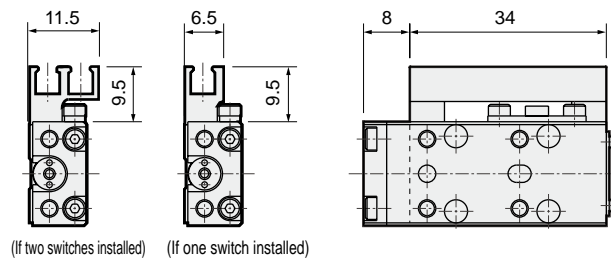


Dimensions (dimensions other than those listed below are the same as the double acting single rod type. Refer to Page 1776.)

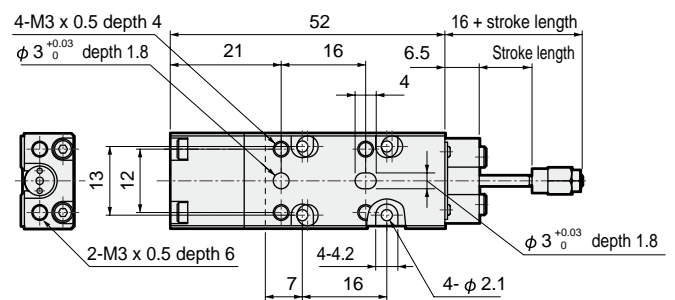
● LCM-P-4.5



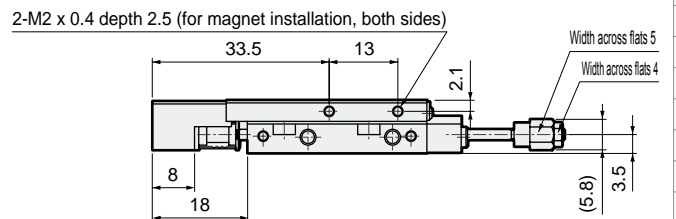
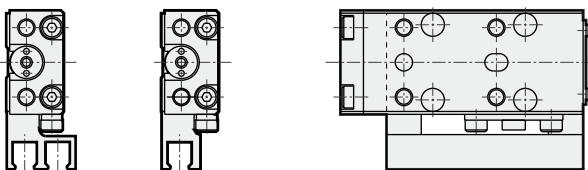
• With magnet/cylinder switch (piping direction: -R)



• With buffer (-B)



• With magnet/cylinder switch (piping direction: -L)



Note: Refer to page 1815 for switch installation dimensions.

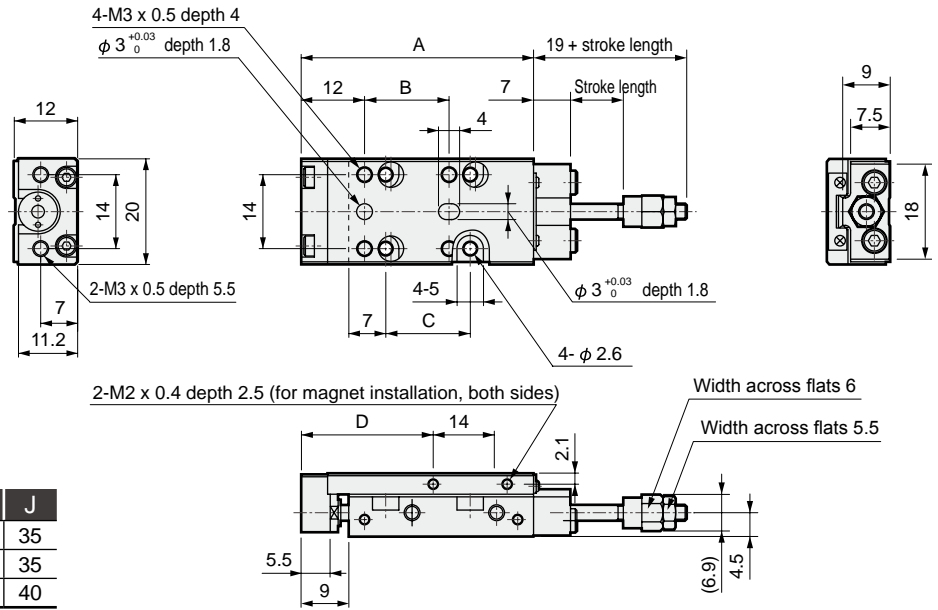
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Linear slide cylinder
Combined functions



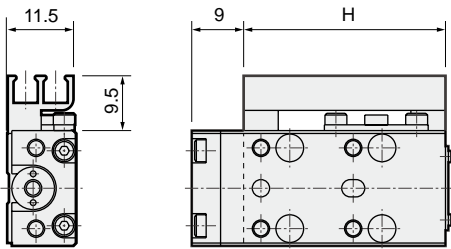
Dimensions (dimensions other than those listed below are the same as the double acting single rod type. Refer to Page 1777.)

● LCM-P-6

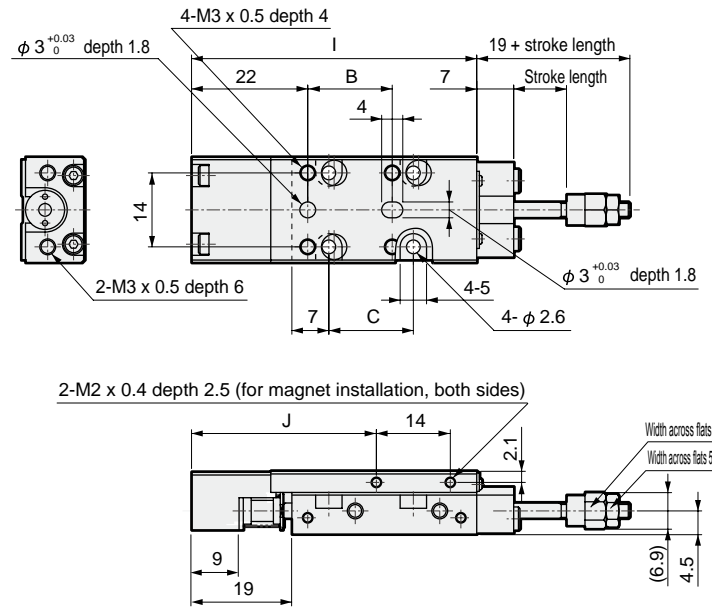


Stroke length	A	B	C	D	H	I	J
5	44	16	16	25	35	54	35
10	44	16	16	25	35	54	35
15	49	21	21	30	40	59	40

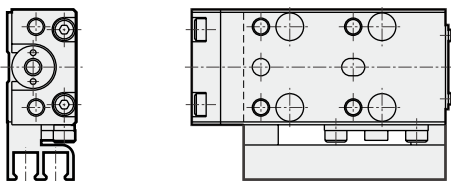
• With magnet/cylinder switch (piping direction: -R)



• With buffer (-B)



• With magnet/cylinder switch (piping direction: -L)



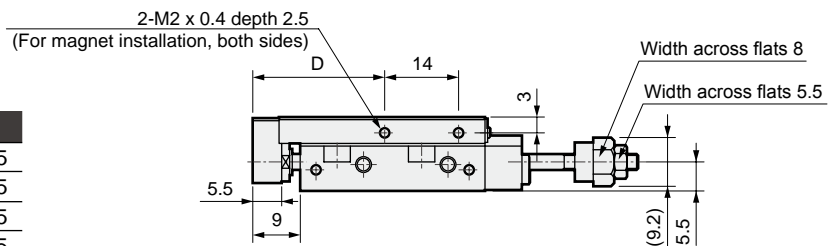
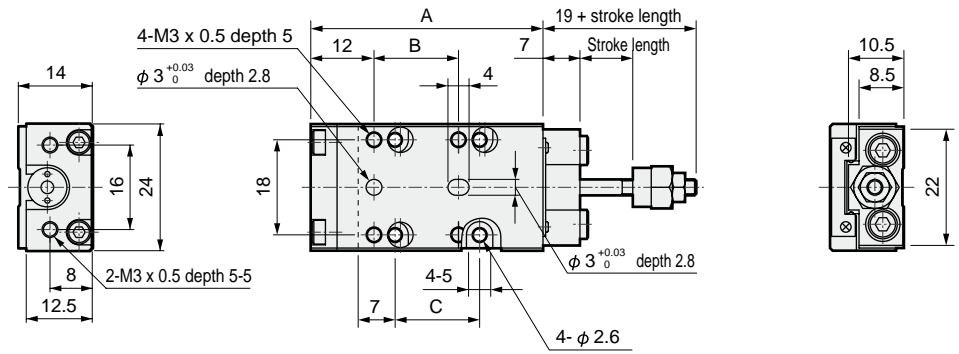
Note: Refer to page 1815 for switch installation dimensions.

- SCP*2
- CMK2
- CMA2
- LCM-P-6
- 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
- With magnet/cylinder switch (piping direction: -R)
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- With magnet/cylinder switch (piping direction: -L)
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending



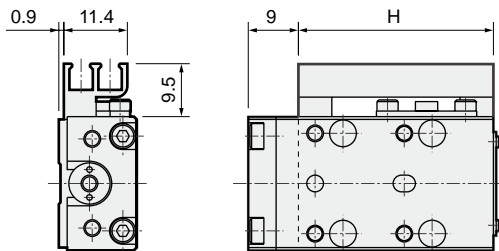
Dimensions (dimensions other than those listed below are the same as the double acting single rod type. Refer to Page 1778.)

● LCM-P-8

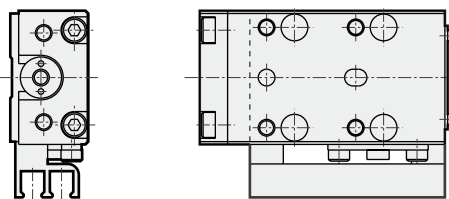


Stroke length	A	B	C	D	H	I	J
5	44	16	16	25	35	54	35
10	44	16	16	25	35	54	35
15	54	26	26	35	45	64	45
20	54	26	26	35	45	64	45

• With magnet/cylinder switch (piping direction: -R)

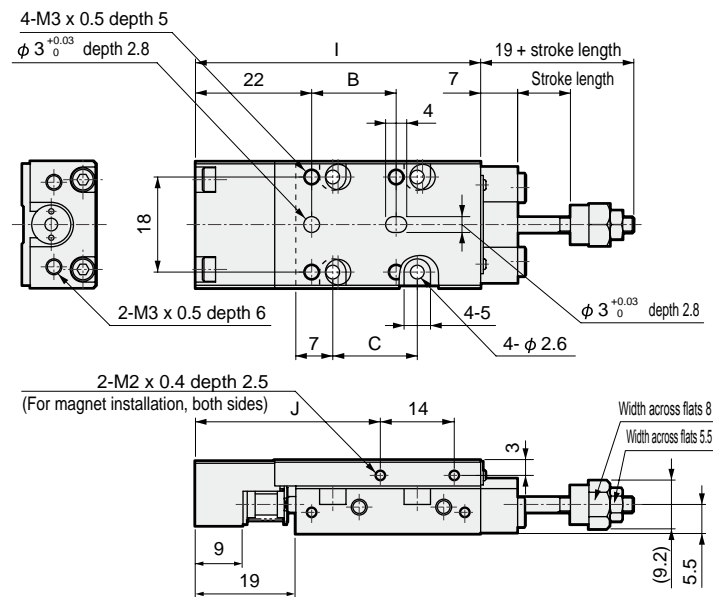


• With magnet/cylinder switch (piping direction: -L)



Note: Refer to page 1815 for switch installation dimensions.

• With buffer (-B)



- 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

Linear slide cylinder Double acting stroke adjustable type (extended/retracted)

LCM-R Series

● Bore size: ϕ 4.5, ϕ 6, ϕ 8



Specifications

Descriptions		LCM-R		
Bore size	mm	ϕ 4.5	ϕ 6	ϕ 8
Actuation		Double acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7		
Min. working pressure	MPa	0.25	0.2	0.15
Withstanding pressure	MPa	1.05		
Ambient temperature	°C	0 to 60		
Port size		M3		
Stroke tolerance	mm	+1.0 0		
Working piston speed	mm/s	30 to 500		
Cushion	Extended	None		
	Retracted	None		
Lubrication		Not required (when lubricating, use turbine oil Class 1 ISOVG 32)		
Adjustable stroke range	Extended	mm	-5 to 0	
	Retracted	mm	-7 to 0	
Repeatability	mm	\pm 0.02		
Allowable energy absorption	J	Refer to the table on Page 1766.		

Specifications with buffer

Descriptions		LCM-**-**-B	
Buffer stroke	mm	4 (Max.)	
Buffer section spring load	Setting	N	0.3
	Operation	N	0.7

Stroke length

Bore size (mm)	Standard stroke length (mm)	Min. stroke length with switch (mm)
ϕ 4.5	5, 10	5
ϕ 6	5, 10, 15	
ϕ 8	5, 10, 15, 20	

Note 1: Other than standard stroke length is not available.

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

Switch specifications

Descriptions	Proximity 2 wire		Proximity 3 wire	
	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay	
Output method	-		NPN output	
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20 mA		100 mA or less	50 mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1 mA or less		10 µA or less	

Note 1: The maximum load current 20mA is applied at 25°C. The current will be lower than 20mA if ambient temperature around switch is higher than 25°C. (5 to 10mA at 60°C)

Cylinder weight

Unit: g

Stroke length (mm)	5		10		15		20		Additional weight	
	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	With buffer	Weight per switch
φ 4.5	52	56	52	56	-	-	-	-	3	10
φ 6	71	76	71	76	80	86	-	-	4	10
φ 8	100	105	100	105	123	129	123	129	5	10

Theoretical thrust table

Unit: N

Bore size (mm)	Working pressure MPa					
	0.2	0.3	0.4	0.5	0.6	0.7
φ 4.5	2.6	3.8	5.1	6.4	7.7	9.0
φ 6	4.2	6.4	8.5	10.6	12.7	14.8
φ 8	8.6	13.0	17.3	21.6	25.9	30.2

- 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

How to order

● Without switch

LCM-R - 6 - 10 - R ————— **J2**

● With switch

LCM-R - 6 - 10 - R - F2H - R - J2

A Bore size

B Stroke length

C Piping direction

D Switch model no.

E Switch quantity

F Option

Symbol	Descriptions
A Bore size (mm)	
4.5	φ 4.5
6	φ 6
8	φ 8

B Stroke length (mm)		Bore size		
		φ 4.5	φ 6	φ 8
5	5	●	●	●
10	10	●	●	●
15	15	-	●	●
20	20	-	-	●

C Piping direction	
R	Right viewed from rod end
L	Left viewed from rod end

D Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
F2H*	F2V*	Proximity	1 color indicator type	2-wire
F3H*	F3V*			3-wire
F2YH*	F2YV*		2 color indicator type	2-wire
F3YH*	F3YV*			3-wire

*Lead wire length	
Blank	1 m (standard)
3	3 m (option)

E Switch quantity	
R	One on rod end
H	One on head end
D	Two

F Option	
B	With buffer
M Note 1	With magnet
F1 Note 1, 2	Magnet + switch rail (switch groove 1 pc.)
F2 Note 1	Magnet + switch rail (switch groove 2 pcs.)
J*	Dowel pin attached (* ... pin number)

⚠ Caution for model no. selection

Note 1: Selection not required when designating the switch type.

Note 2: Available only for φ 4.5.

<Example of model number>

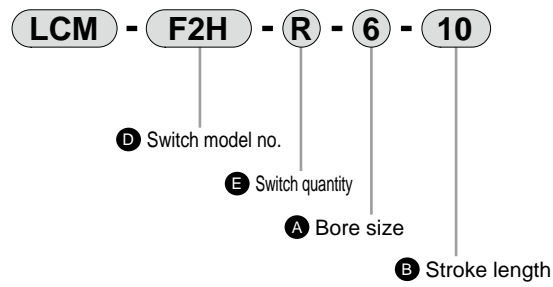
LCM-R-6-10-R-F2H-R-J2

Model: Linear slide cylinder,
double acting stroke adjustable type (extended/retracted)

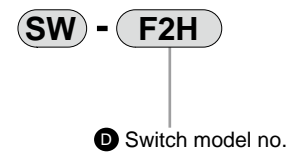
- A** Bore size: φ 6 mm
- B** Stroke length: 10 mm
- C** Piping direction: Right viewed from rod end
- D** Switch model no.: Proximity switch F2H, lead wire 1m
- E** Switch quantity: One on rod end
- F** Option: Dowel pin attached (2 pcs.)

How to order switch

- Switch body + switch rail + magnet

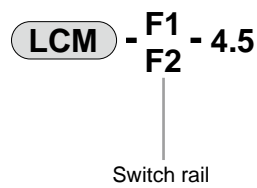


- Only switch body

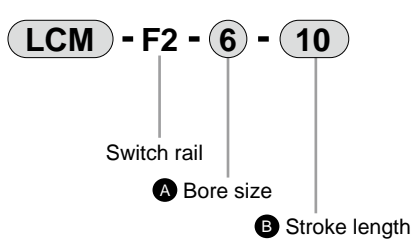


- Only switch rail

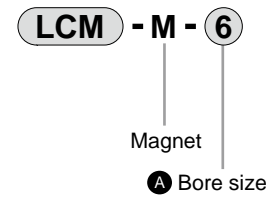
- ϕ 4.5



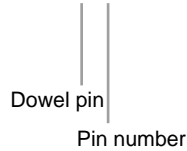
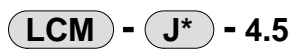
- ϕ 6, ϕ 8



- Only magnet



How to order dowel pin

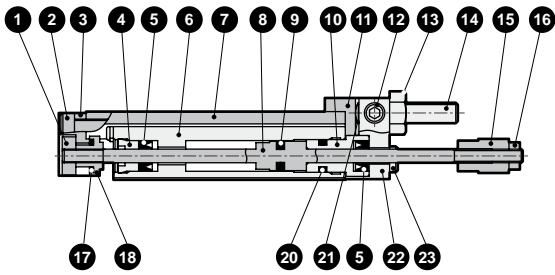


SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

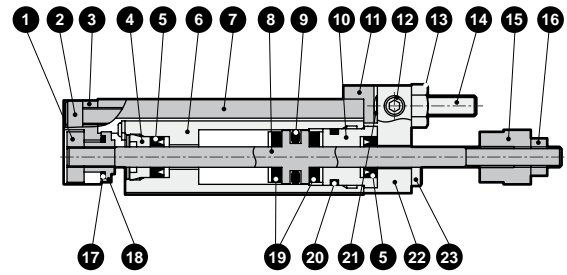
Linear slide cylinder
Combined functions

Internal structure and parts list

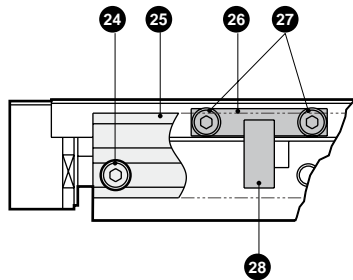
● LCM-R-4.5



● LCM-R-6, 8



● LCM-R-4.5 to 8 with magnet/switch rail



• Dowel pin (-J)



Parts list

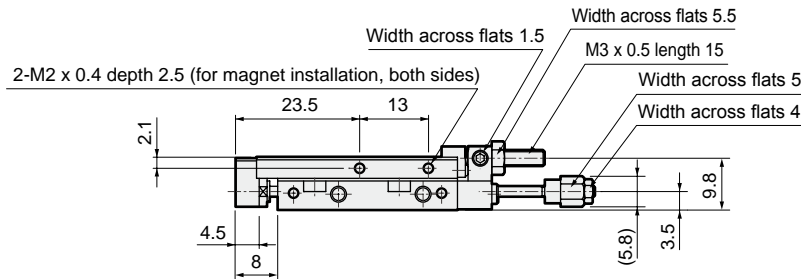
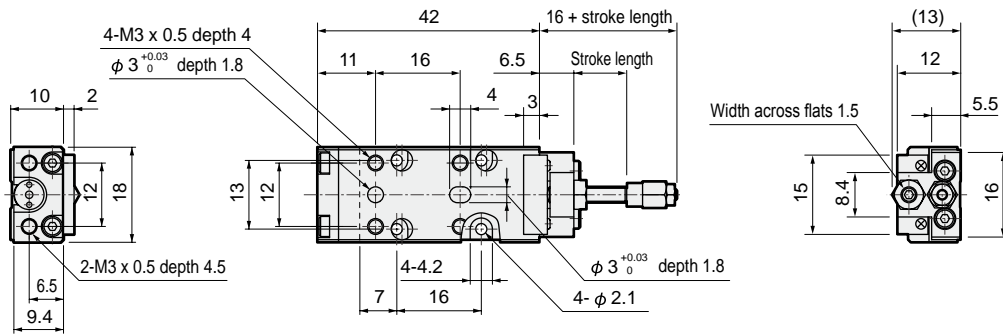
No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Floating bush A	Stainless steel		16	Hexagon nut	φ 4.5 Stainless steel	
2	Bolt	Stainless steel				φ 6, φ 8 Steel	Nickel plating
3	End plate	Aluminum alloy		17	O ring	Nitrile rubber	
4	Rod cover	Acetar resin		18	Floating bush B	Stainless steel	
5	Rod packing seal	Nitrile rubber		19	Cushion rubber	Urethane rubber (φ 6, φ 8)	
6	Cylinder body	Stainless steel		20	O ring	Nitrile rubber	
7	Slide table	Stainless steel		21	Machine screw	Stainless steel	
8	Piston	Stainless steel		22	Stopper A	Steel	Nickel plating
9	Piston packing seal	Nitrile rubber		23	Hexagon socket head cap bolt	Stainless steel	
10	Guard	Aluminum alloy		24	Hexagon socket head cap bolt	Stainless steel	
11	Stopper B	Steel	Nickel plating	25	Switch rail	Aluminum alloy	
12	Machine screw	Stainless steel		26	Plate	Aluminum alloy	
13	Hexagon nut	Stainless steel		27	Hexagon socket head cap bolt	Stainless steel	
14	Stopper bolt	Stainless steel		28	Magnet	Plastic	
15	Adjustable stopper	Steel	Nickel plating	29	Dowel pin	Steel	

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

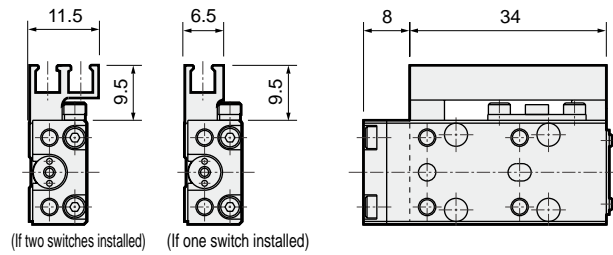


Dimensions (dimensions other than those listed below are the same as the double acting single rod type. Refer to page 1776.)

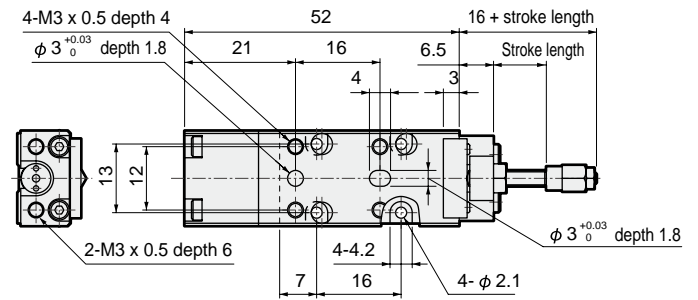
● LCM-R-4.5



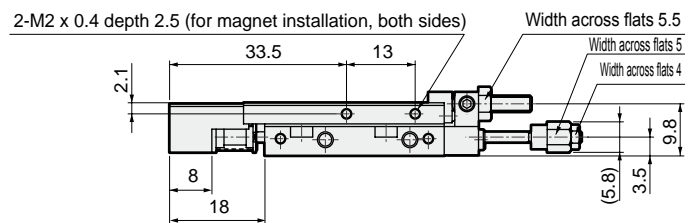
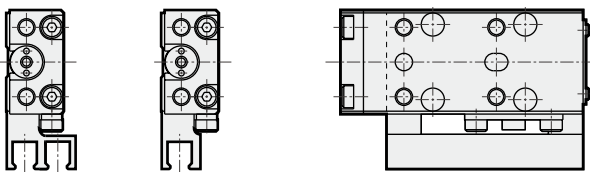
• With magnet/cylinder switch (piping direction: -R)



• With buffer (-B)



• With magnet/cylinder switch (piping direction: -L)



Note: Refer to page 1815 for switch installation dimensions.

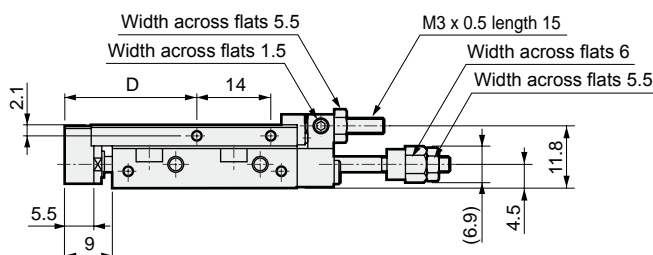
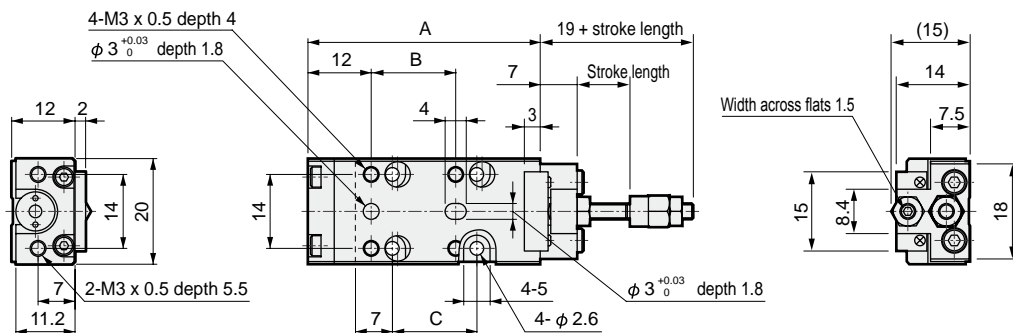
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Linear slide cylinder
Combined functions



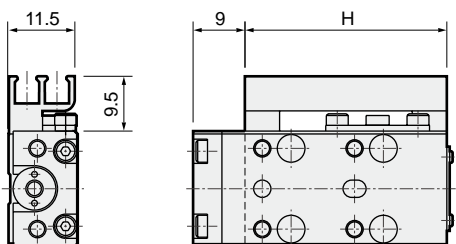
Dimensions (dimensions other than those listed below are the same as the double acting single rod type. Refer to page 1777.)

● LCM-R-6

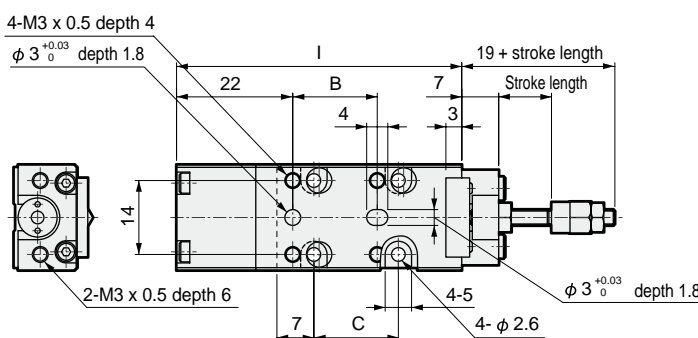


Stroke length	A	B	C	D	H	I	J
5	44	16	16	25	35	54	35
10	44	16	16	25	35	54	35
15	49	21	21	30	40	59	40

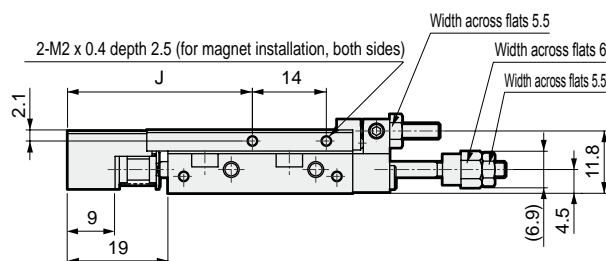
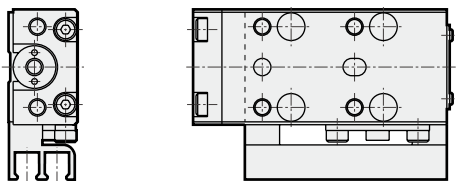
• With magnet/cylinder switch (piping direction: -R)



• With buffer (-B)



• With magnet/cylinder switch (piping direction: -L)



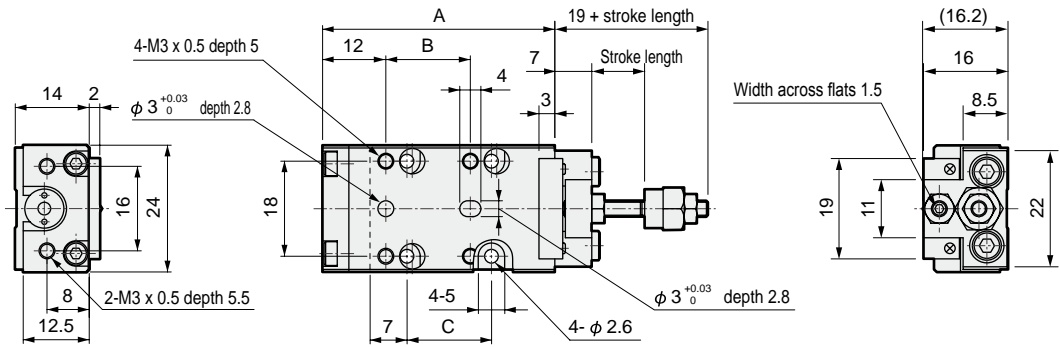
Note: Refer to Page 1815 for switch installation dimensions.

- SCP*2
- CMK2
- CMA2
- LCM-R-6
- 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

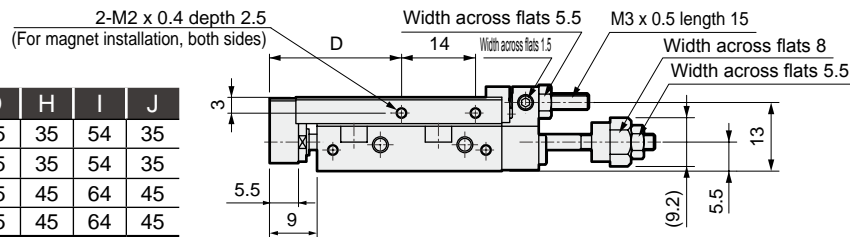


Dimensions (dimensions other than those listed below are the same as the double acting single rod type. Refer to page 1778.)

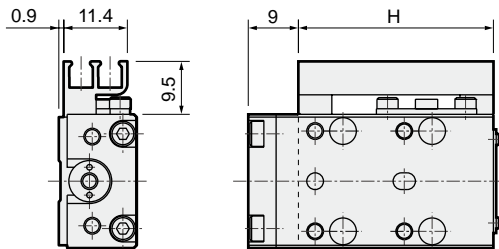
● LCM-R-8



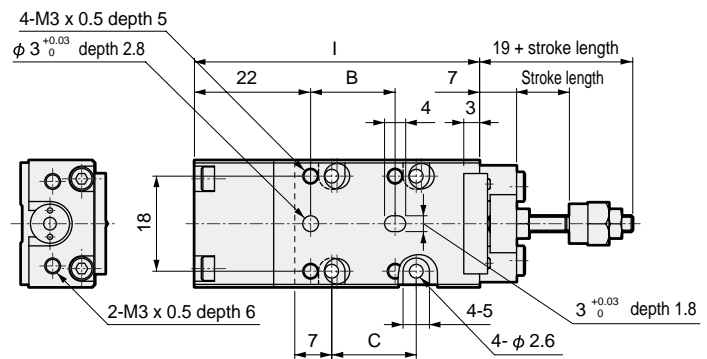
Stroke length	A	B	C	D	H	I	J
5	44	16	16	25	35	54	35
10	44	16	16	25	35	54	35
15	54	26	26	35	45	64	45
20	54	26	26	35	45	64	45



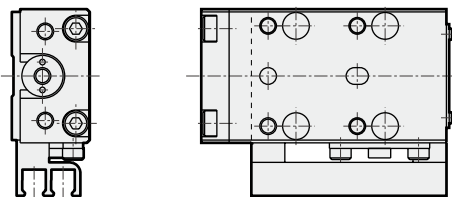
• With magnet/cylinder switch (piping direction: -R)



• With buffer (-B)



• With magnet/cylinder switch (piping direction: -L)



Note: Refer to Page 1815 for switch installation dimensions.

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

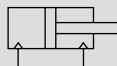
Linear slide cylinder
Combined functions

Linear slide cylinder Double acting side installation type

LCM-A Series

● Bore size: ϕ 4.5, ϕ 6, ϕ 8

JIS symbol



Specifications

Descriptions	LCM-A			
Bore size	mm	ϕ 4.5	ϕ 6	ϕ 8
Actuation		Double acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7		
Min. working pressure	MPa	0.2		0.15
Withstanding pressure	MPa	1.05		
Ambient temperature	$^{\circ}$ C	0 to 60		
Port size		M3		
Stroke tolerance	mm	+1.0 0		
Working piston speed	mm/s	30 to 500		
Cushion		None	Rubber cushioned	
Lubrication		Not required (when lubricating, use turbine oil Class 1 ISOVG 32)		
Allowable energy absorption	J	Refer to the table on Page 1766.		

Specifications with buffer

Descriptions	LCM-*-*-B		
Buffer stroke	mm	4 (Max.)	
Buffer section spring load	Setting	N	0.3
	Operation	N	0.7

Stroke length

Bore size (mm)	Standard stroke length (mm)	Min. stroke length with switch (mm)
ϕ 4.5	5, 10	5
ϕ 6	5, 10, 15	
ϕ 8	5, 10, 15, 20	

Note 1: Other than standard stroke length is not available.

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

Switch specifications

Descriptions	Proximity 2 wire		Proximity 3 wire	
	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay	
Output method	-		NPN output	
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20 mA		100 mA or less	50 mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1 mA or less		10 µA or less	

Note 1: The maximum load current 20mA is applied at 25°C. The current will be lower than 20mA if ambient temperature around switch is higher than 25°C. (5 to 10mA at 60°C)

Cylinder weight

Unit: g

Stroke length (mm)	5		10		15		20		Additional weight	
	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	With buffer	Weight per switch
φ 4.5	59	63	59	63	-	-	-	-	3	10
φ 6	78	83	78	83	88	94	-	-	4	10
φ 8	106	111	106	111	132	138	132	138	5	10

Theoretical thrust table

Unit: N

Bore size (mm)	Operating direction	Working pressure MPa					
		0.2	0.3	0.4	0.5	0.6	0.7
φ 4.5	Push	3.2	4.8	6.4	8.0	9.5	11.1
	Pull	2.6	3.8	5.1	6.4	7.7	9.0
φ 6	Push	5.6	8.5	11.3	14.1	16.9	19.7
	Pull	4.2	6.4	8.5	10.6	12.7	14.8
φ 8	Push	10.1	15.1	20.1	25.2	30.2	35.2
	Pull	8.6	13.0	17.3	21.6	25.9	30.2

- 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

How to order

● Without switch

LCM-A - 6 - 10 - R - J2

● With switch

LCM-A - 6 - 10 - R - F2H - R - J2

Ⓐ Bore size

Ⓑ Stroke length

Ⓒ Table direction

Ⓓ Switch model no.

Ⓔ Switch quantity

Ⓕ Option

Symbol	Descriptions
Ⓐ Bore size (mm)	
4.5	φ 4.5
6	φ 6
8	φ 8

Ⓑ Stroke length (mm)		Bore size		
		φ 4.5	φ 6	φ 8
5	5	●	●	●
10	10	●	●	●
15	15	-	●	●
20	20	-	-	●

Ⓒ Table direction	
R	Right viewed from rod end
L	Left viewed from rod end

Ⓓ Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
F2H*	F2V*	Proximity	1 color indicator type	2-wire
F3H*	F3V*			3-wire
F2YH*	F2YV*		2 color indicator type	2-wire
F3YH*	F3YV*			3-wire

*Lead wire length	
Blank	1 m (standard)
3	3 m (option)

Ⓔ Switch quantity	
R	One on rod end
H	One on head end
D	Two

Ⓕ Option	
B	With buffer
M Note 1	With magnet
F1 Note 1, 2	With magnet + switch rail (switch groove 1 pcs.)
F2 Note 1	With magnet + switch rail (switch groove 2 pc.)
J*	Dowel pin attached (* ... pin number)

⚠ Caution for model no. selection

Note 1: Selection not required when designating the switch type.

Note 2: Available only for φ 4.5.

<Example of model number>

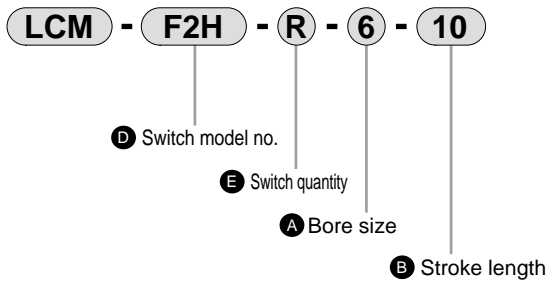
LCM-A-6-10-R-F2H-R-J2

Model: Linear slide cylinder double acting side installation type

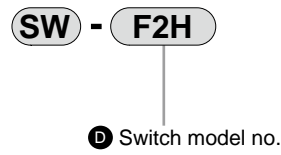
- Ⓐ Bore size: φ 6 mm
- Ⓑ Stroke length: 10 mm
- Ⓒ Piping direction: Right viewed from rod end
- Ⓓ Switch model no.: Proximity switch F2H, lead wire 1m
- Ⓔ Switch quantity: One on rod end
- Ⓕ Option: Dowel pin attached (2 pc.)

How to order switch

- Switch body + switch rail + magnet

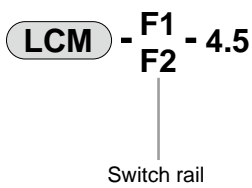


- Only switch body

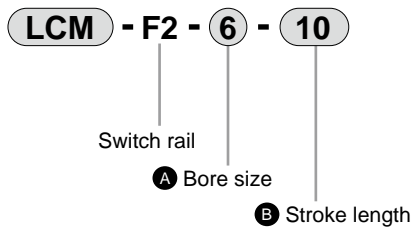


- Only switch rail

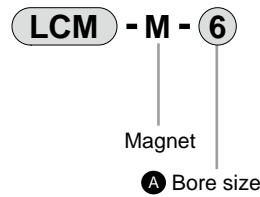
- ϕ 4.5



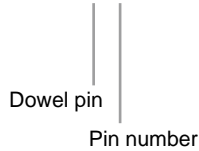
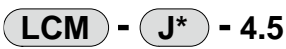
- ϕ 6, ϕ 8



- Only magnet



How to order dowel pin

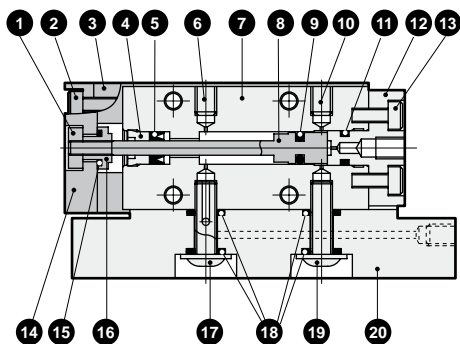


SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

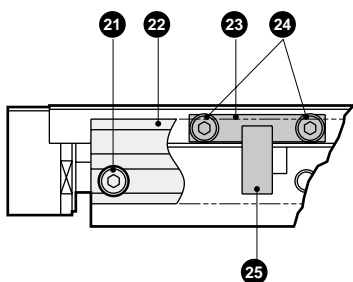
Linear slide cylinder
 Combined functions

Internal structure and parts list

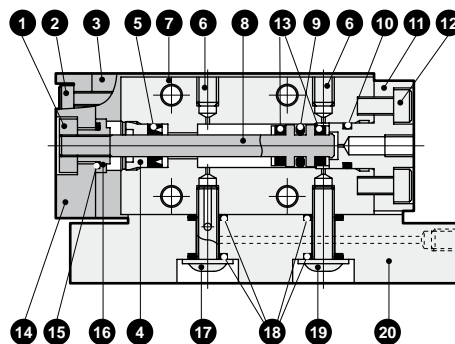
● LCM-A-4.5



● LCM-A-4.5 to 8-F with magnet/switch rail



● LCM-A-6, 8



● Dowel pin (-J)



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Floating bush A	Stainless steel		14	End plate	Aluminum alloy	
2	Bolt	Stainless steel		15	O ring	Nitrile rubber	
3	Slide table	Stainless steel		16	Floating bush B	Stainless steel	
4	Rod cover	Acetar resin		17	Hexagon socket head cap bolt	Stainless steel	
5	Rod packing seal	Nitrile rubber		18	O ring	Nitrile rubber	
6	Machine screw	Stainless steel		19	Hexagon socket head cap bolt	Stainless steel	
7	Cylinder body	Stainless steel		20	Base	Aluminum alloy	
8	Piston Note 1	Stainless steel		21	Hexagon socket head cap bolt	Stainless steel	
9	Piston packing seal	Nitrile rubber		22	Switch rail	Aluminum alloy	
10	O ring	Nitrile rubber		23	Plate	Aluminum alloy	
11	Head cover	Aluminum alloy	Alumite	24	Hexagon socket head cap bolt	Stainless steel	
12	Bolt	Stainless steel		25	Magnet	Plastic	
13	Cushion rubber	Urethane rubber (φ 6, φ 8)		26	Dowel pin	Steel	

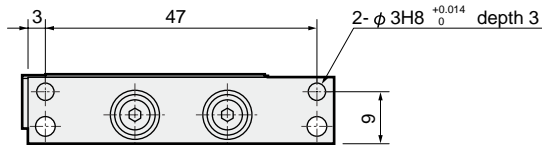
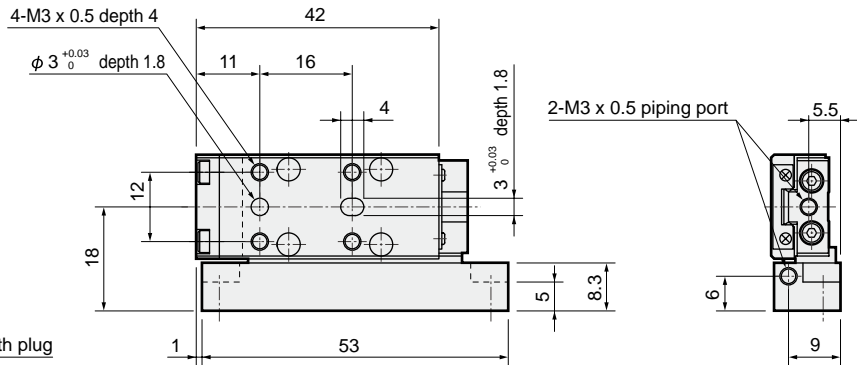
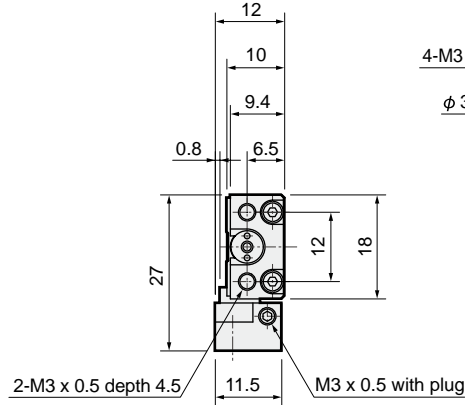
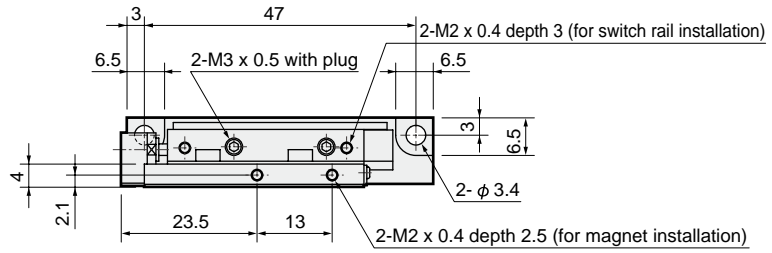
- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
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- SRL2
- SRG
-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

Dimensions

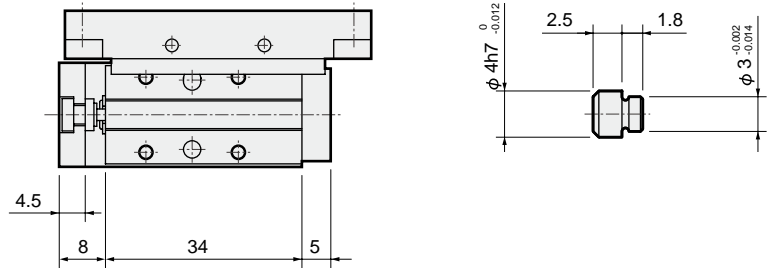


SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
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MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

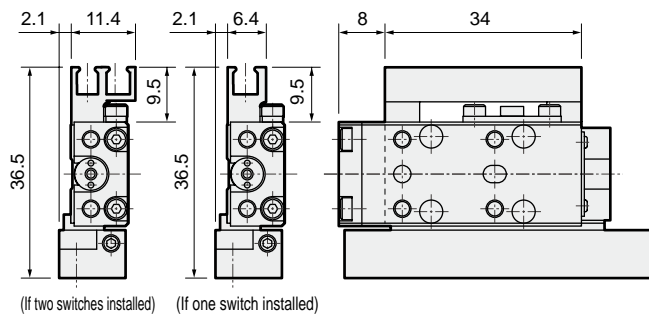
● LCM-A-4.5-R (piping direction: right)



• Dowel pin (-J)

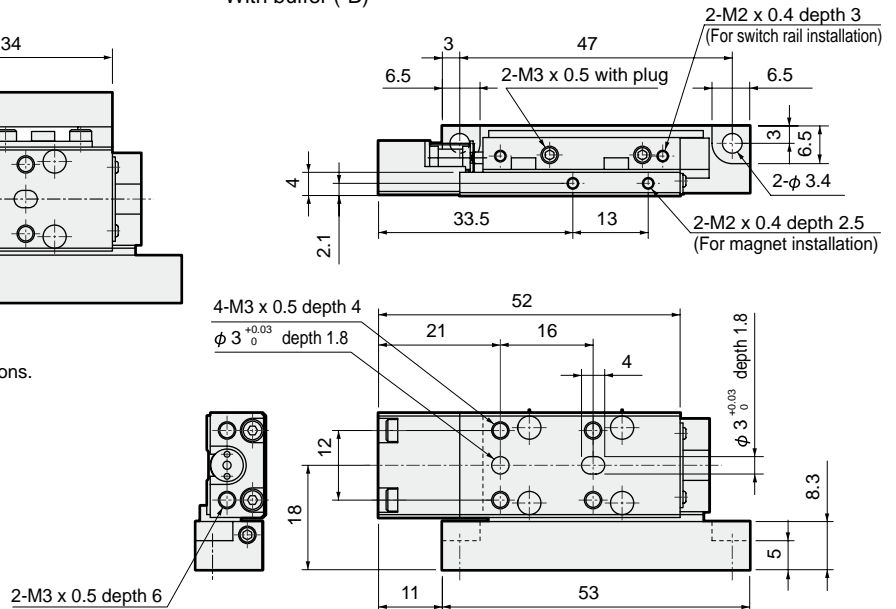


• With magnet/cylinder switch



Note: Refer to Page 1815 for switch installation dimensions.

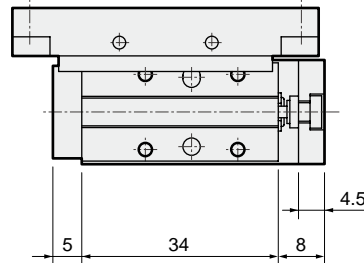
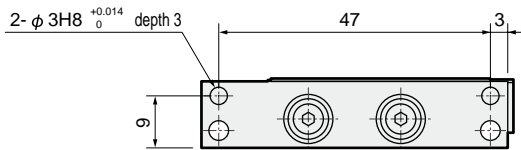
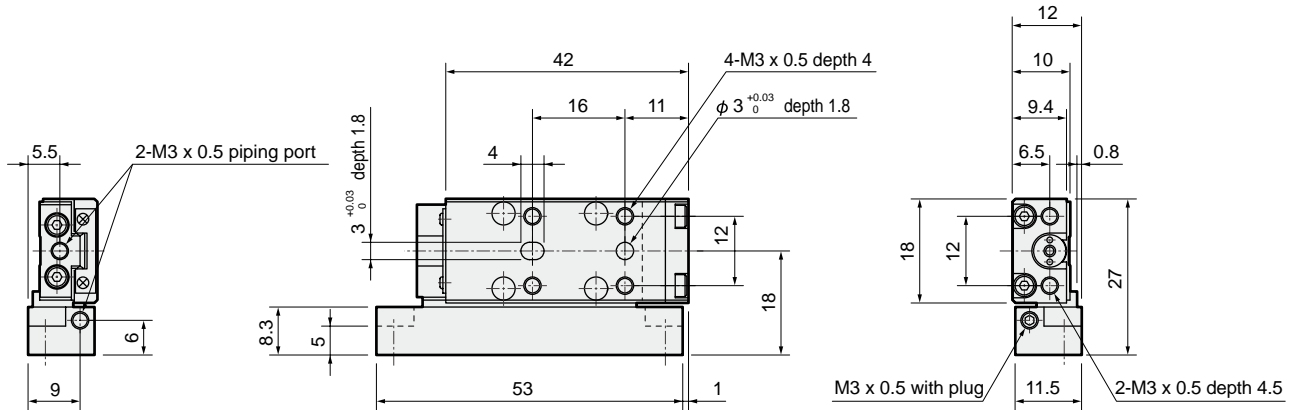
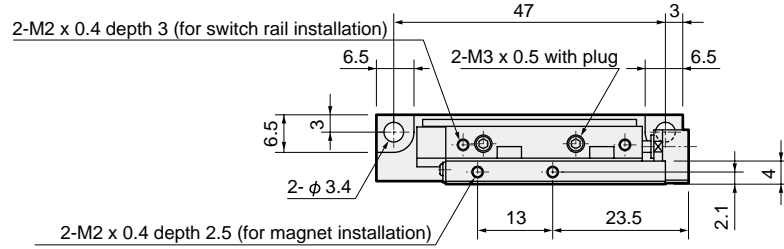
• With buffer (-B)



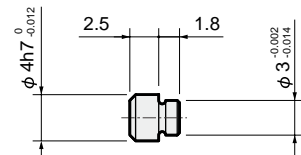
Dimensions



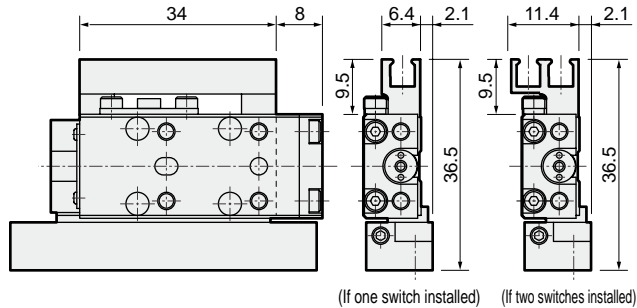
● LCM-A-4.5-L (piping direction: left)



• Dowel pin (-J)

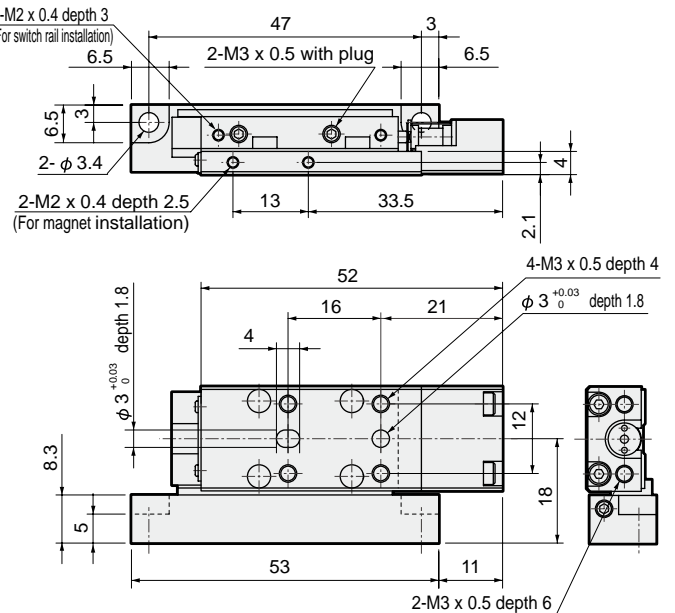


• With magnet/cylinder switch



Note: Refer to Page 1815 for switch installation dimensions.

• With buffer (-B)



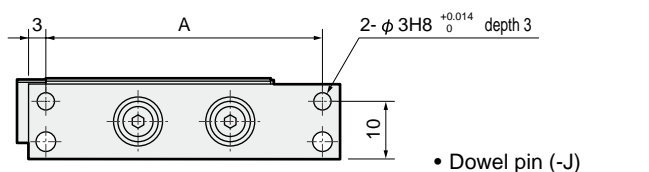
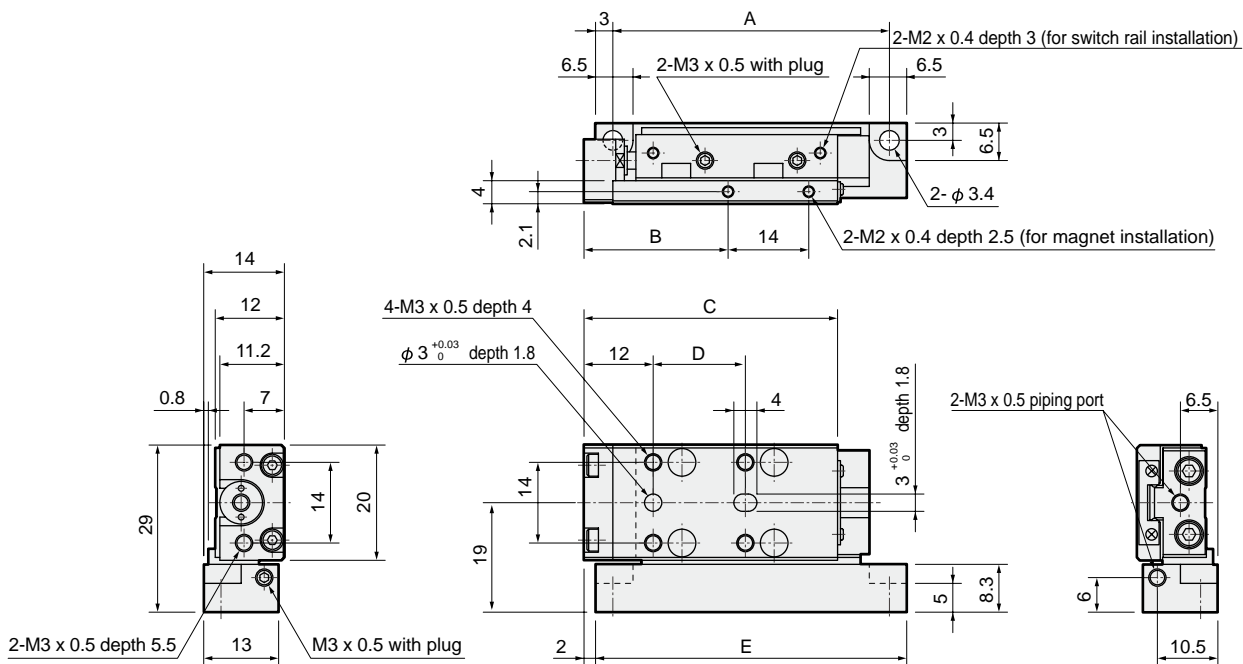
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Linear slide cylinder
Combined functions

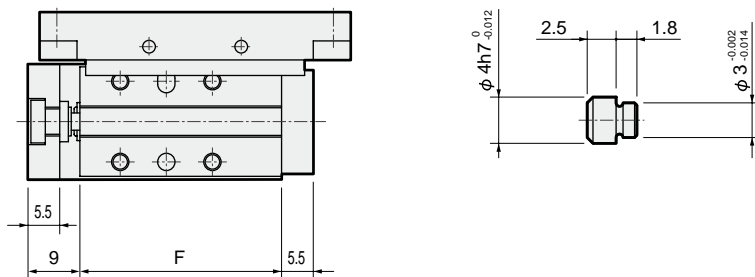
Dimensions



● LCM-A-6-R (piping direction: right)

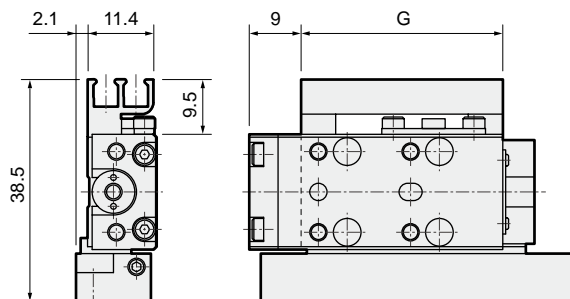


• Dowel pin (-J)

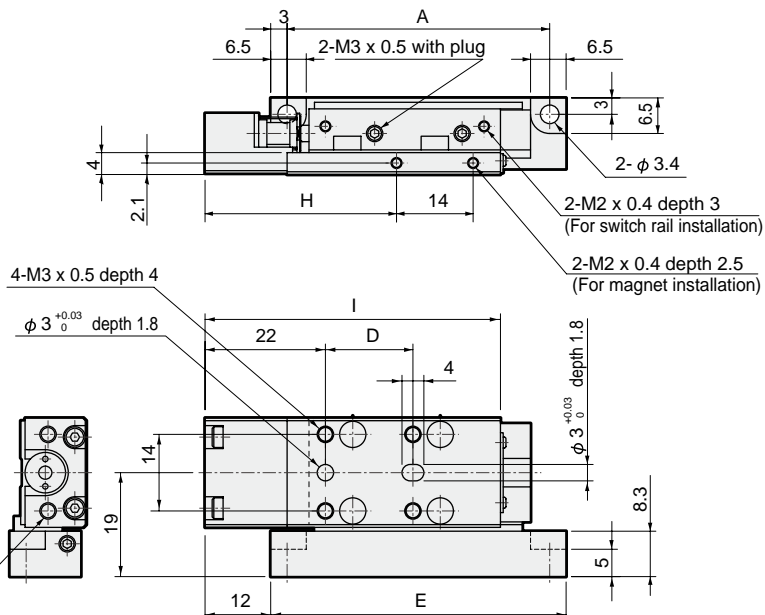


Stroke length	A	B	C	D	E	F	G	H	I
5	48	25	44	16	54	35	35	35	54
10	48	25	44	16	54	35	35	35	54
15	53	30	49	21	59	40	40	40	59

• With magnet/cylinder switch



• With buffer (-B)

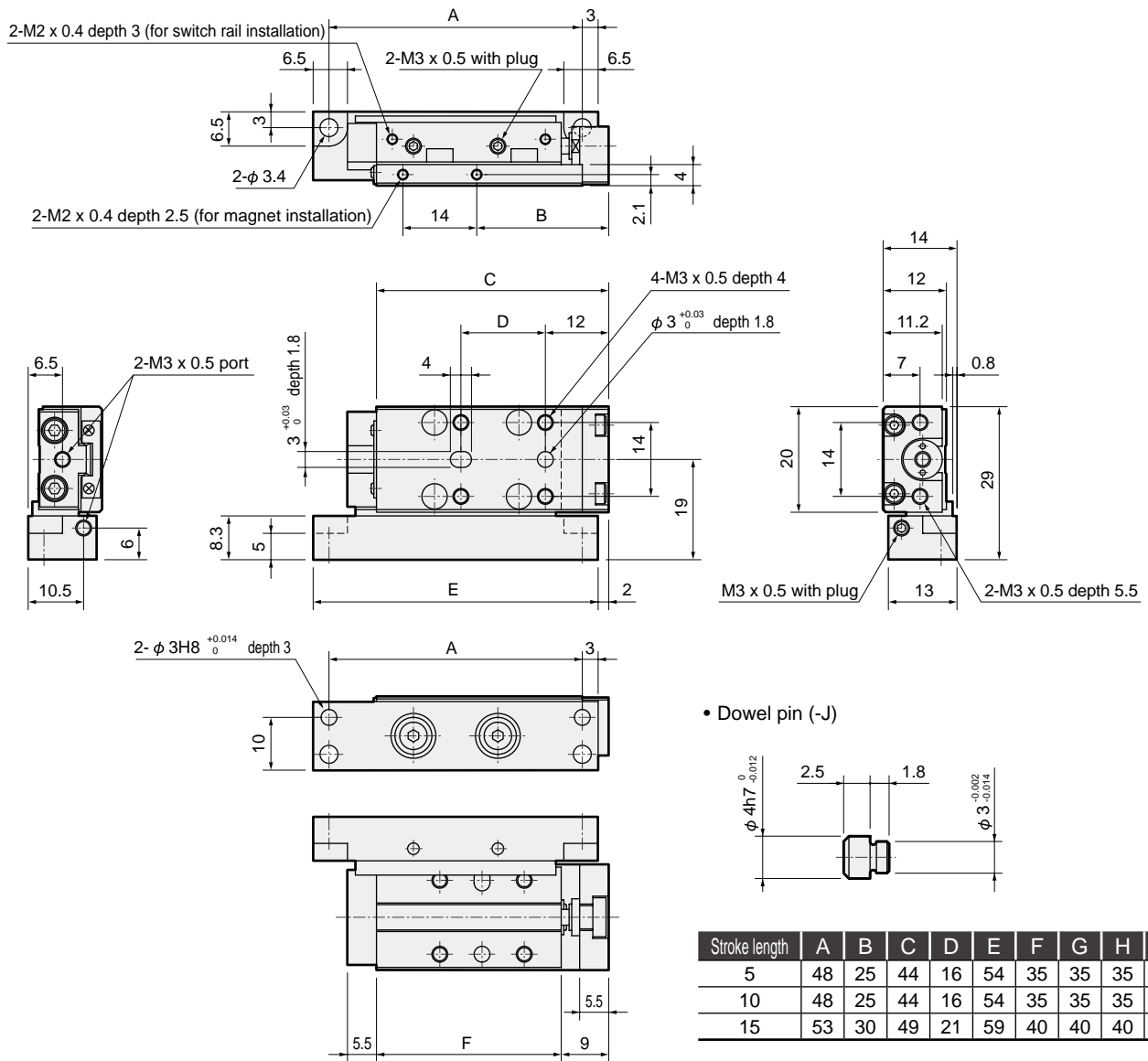


Note: Refer to Page 1815 for switch installation dimensions.

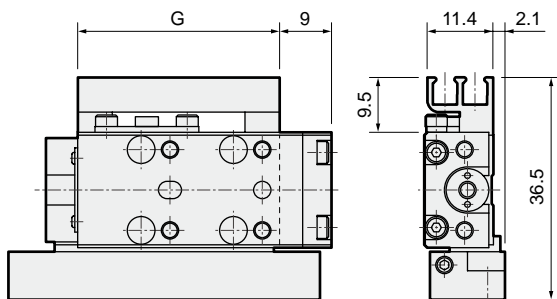
Dimensions



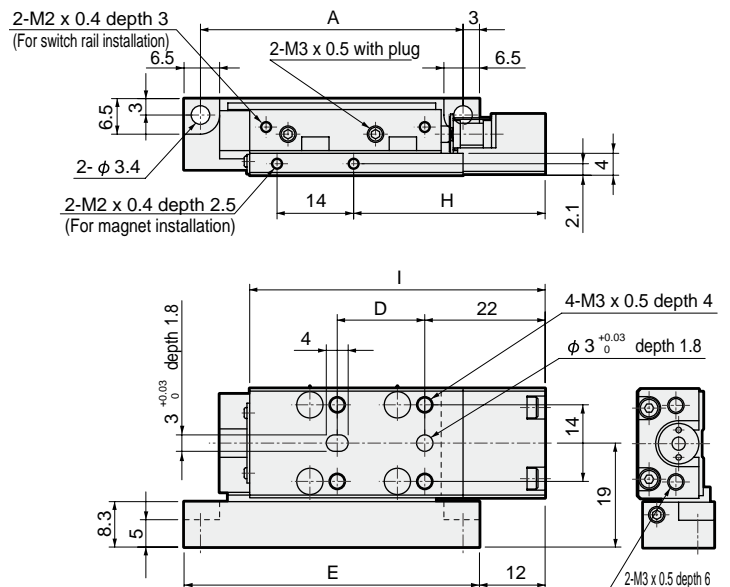
● LCM-A-6-L (piping direction: left)



• With magnet/cylinder switch



• With buffer (-B)



Note: Refer to Page 1815 for switch installation dimensions.

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
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- SSD
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- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM**
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
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- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC

Ending

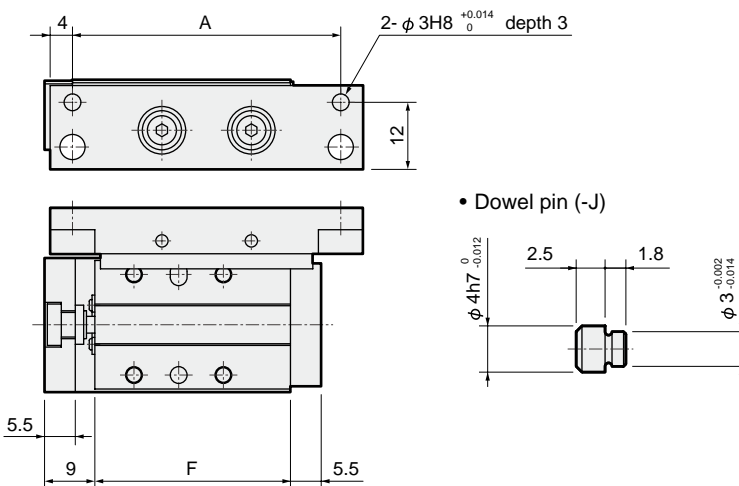
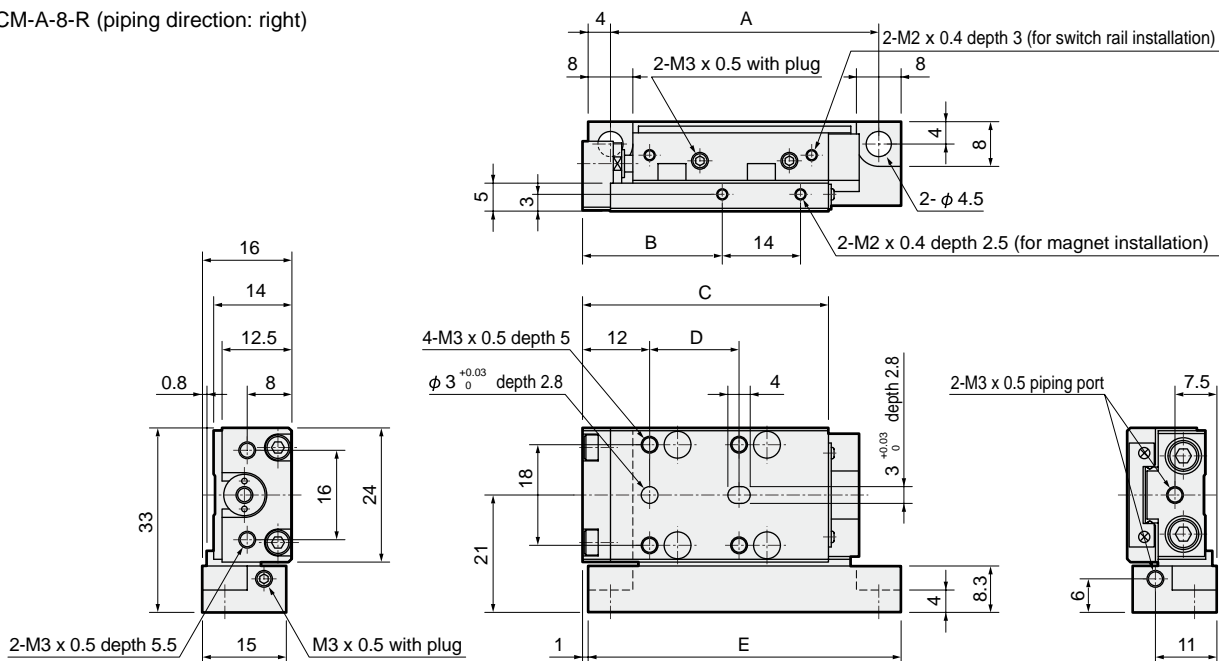
Linear slide cylinder
Combined functions

Dimensions



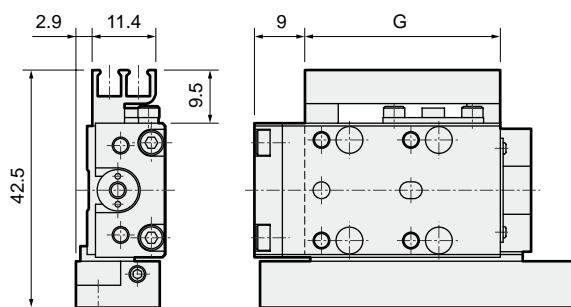
- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
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- MDC2
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- JSC3
- USSD
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- STG
- STS/L
- LCS
- LCG
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- STR2
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- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

● LCM-A-8-R (piping direction: right)



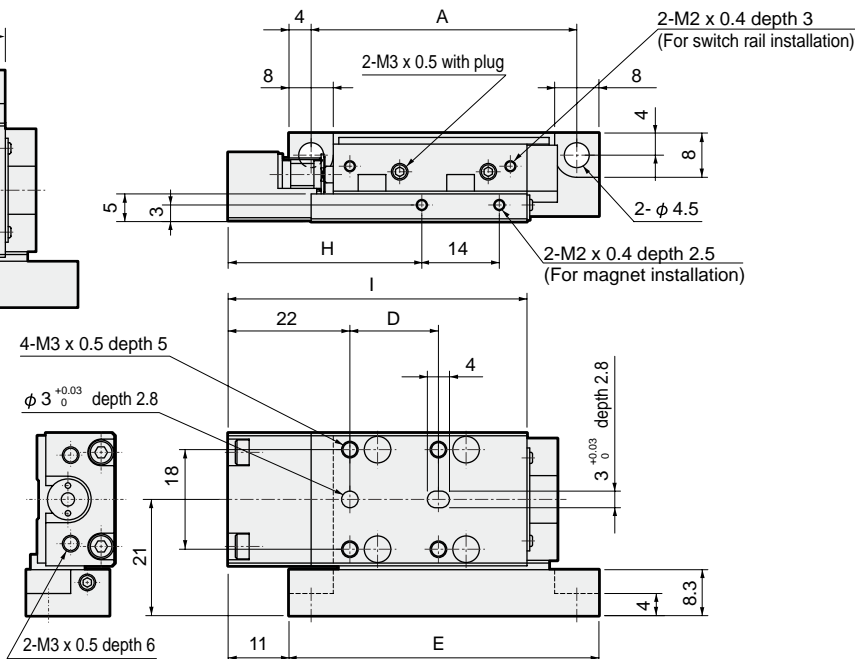
Stroke length	A	B	C	D	E	F	G	H	I
5	48	25	44	16	56	35	35	35	54
10	48	25	44	16	56	35	35	35	54
15	58	35	54	26	66	45	45	45	64
20	58	35	54	26	66	45	45	45	64

● With magnet/cylinder switch



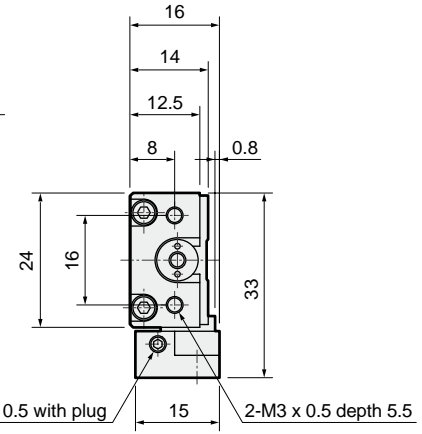
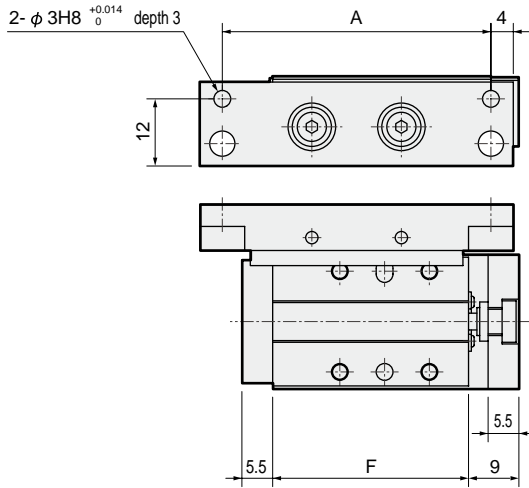
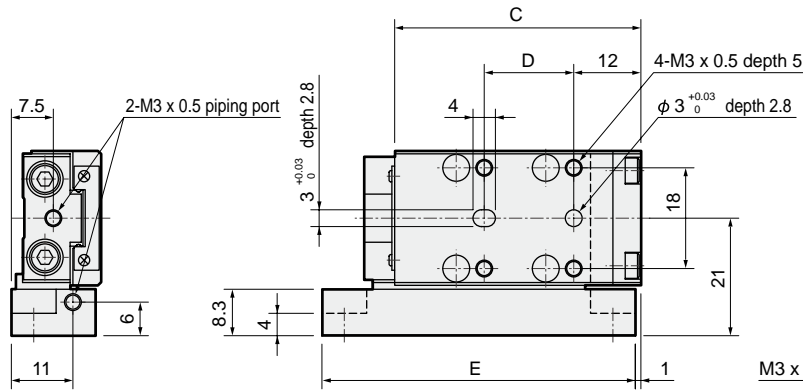
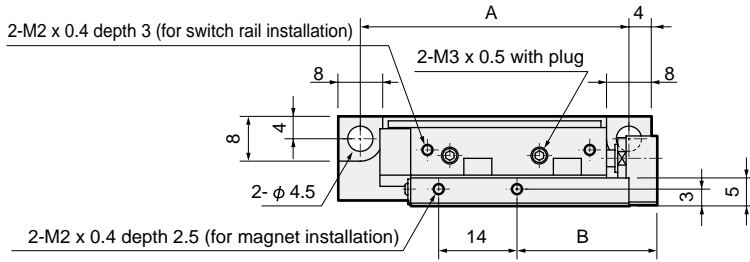
Note: Refer to Page 1815 for switch installation dimensions.

● With buffer (-B)

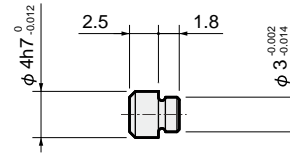


Dimensions

● LCM-A-8-L (piping direction: left)

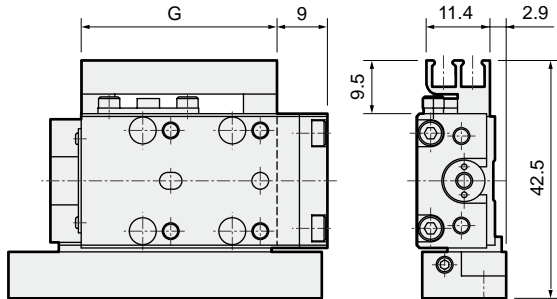


● Dowel pin (-J)



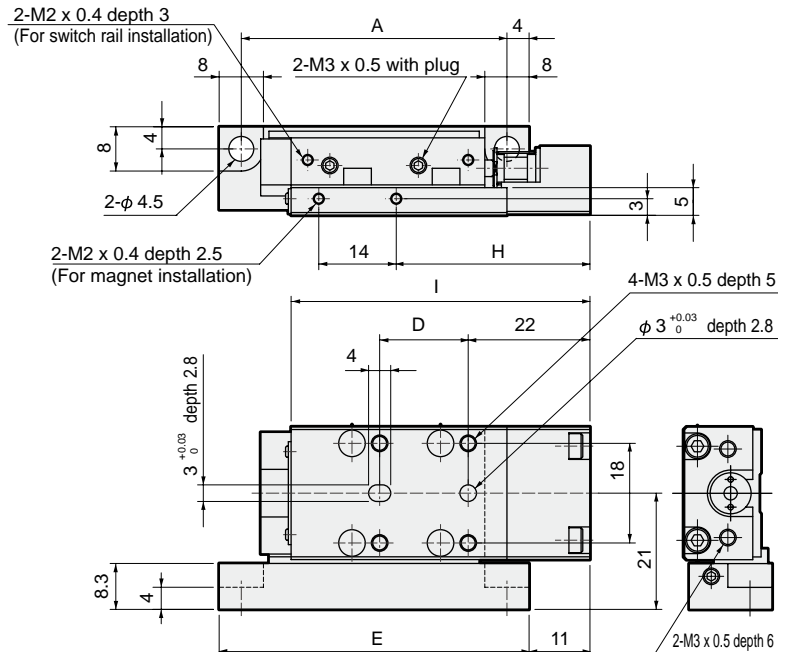
Stroke length	A	B	C	D	E	F	G	H	I
5	48	25	44	16	56	35	35	35	54
10	48	25	44	16	56	35	35	35	54
15	58	35	54	26	66	45	45	45	64
20	58	35	54	26	66	45	45	45	64

● With magnet/cylinder switch



Note: Refer to Page 1815 for switch installation dimensions.

● With buffer (-B)



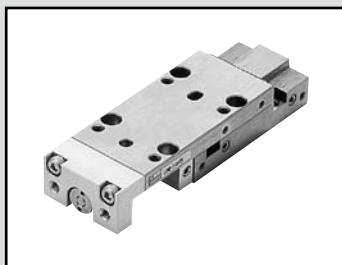
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC

Ending

Linear slide cylinder
Combined functions

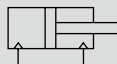
Linear slide cylinder Double acting single rod type clean room specifications

LCM -P73 Series



● Bore size: ϕ 4.5, ϕ 6, ϕ 8

JIS symbol



Specifications

Descriptions		LCM -P73		
Bore size	mm	ϕ 4.5	ϕ 6	ϕ 8
Actuation		Double acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7		
Min. working pressure	MPa	0.2		0.15
Withstanding pressure	MPa	1.05		
Ambient temperature	°C	0 to 60		
Port size		M3		
Stroke tolerance	mm	+1.0 0		
Working piston speed	mm/s	30 to 300		
Cushion		None	Rubber cushioned	
Lubrication		Not available		
Allowable energy absorption	J	Refer to the table on Page 1766.		

Stroke length

Bore size (mm)	Standard stroke length (mm)	Min. stroke length with switch (mm)
ϕ 4.5	5, 10	5
ϕ 6	5, 10, 15	
ϕ 8	5, 10, 15, 20	

Note 1: Other than standard stroke length is not available.

Switch specifications

Descriptions	Proximity 2 wire		Proximity 3 wire	
	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay	
Output method	-		NPN output	
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC \pm 10%	30 VDC or less	
Load current	5 to 20 mA		100 mA or less	50 mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1 mA or less		10 μ A or less	

Note 1: The maximum load current 20mA is applied at 25°C. The current will be lower than 20mA if ambient temperature around switch is higher than 25°C.
(5 to 10mA at 60°C)

Cylinder weight

Unit: g

Stroke length (mm)	5		10		15		20		Additional weight
Bore size (mm)	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	Magnet + Without switch rail	Magnet + With switch rail	Weight per switch
φ 4.5	45	49	45	49	-	-	-	-	10
φ 6	61	66	61	66	69	75	-	-	10
φ 8	87	92	87	92	108	114	108	114	10

Theoretical thrust table

Unit: N

Bore size (mm)	Operating direction	Working pressure MPa					
		0.2	0.3	0.4	0.5	0.6	0.7
φ 4.5	Push	3.2	4.8	6.4	8.0	9.5	11.1
	Pull	2.6	3.8	5.1	6.4	7.7	9.0
φ 6	Push	5.6	8.5	11.3	14.1	16.9	19.7
	Pull	4.2	6.4	8.5	10.6	12.7	14.8
φ 8	Push	10.1	15.1	20.1	25.2	30.2	35.2
	Pull	8.6	13.0	17.3	21.6	25.9	30.2

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 side cylinder
 Combined functions

LCM-P73Series

How to order

● Without switch

LCM - **6** - **10** - **R** ————— **J2** **P73**

● With switch

LCM - **6** - **10** - **R** - **F2H** - **R** - **J2** **P73**

A Bore size

B Stroke length

C Piping direction

D Switch model no.

E Switch quantity

F Option

G Clean room specifications

Symbol	Descriptions
A Bore size (mm)	
4.5	φ 4.5
6	φ 6
8	φ 8

		Bore size			
		φ 4.5	φ 6	φ 8	
B Stroke length (mm)	5	5	●	●	●
	10	10	●	●	●
	15	15	-	●	●
	20	20	-	-	●

C Piping direction	
R	Right viewed from rod end
L	Left viewed from rod end

D Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
F2H*	F2V*	Proximity	1 color indicator type	2-wire
F3H*	F3V*			3-wire
F2YH*	F2YV*		2 color indicator type	2-wire
F3YH*	F3YV*			3-wire

*Lead wire length	
Blank	1 m (standard)
3	3 m (option)

E Switch quantity	
R	1 on rod end
H	1 on head end
D	Two

F Option	
M Note 1	With magnet
F1 Note 1, 2	With magnet + switch rail (switch groove 1 pc.)
F2 Note 1	With magnet + switch rail (switch groove 2 pcs.)
J*	Dowel pin attached (* ... pin number)

G Clean room specifications	
P73	Vacuum treatment

⚠ Caution for model no. selection

Note 1: Selection not required when designating the switch type.

Note 2: Available only for φ 4.5.

<Example of model number>

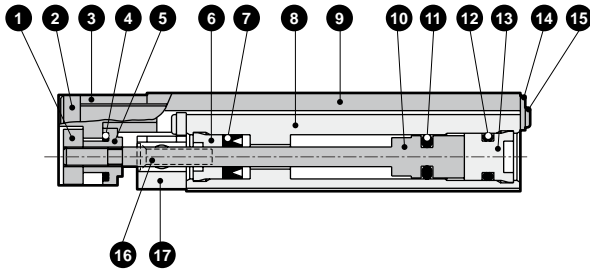
LCM-6-10-R-F2H-R-J2P73

Model: Linear slide cylinder, double acting

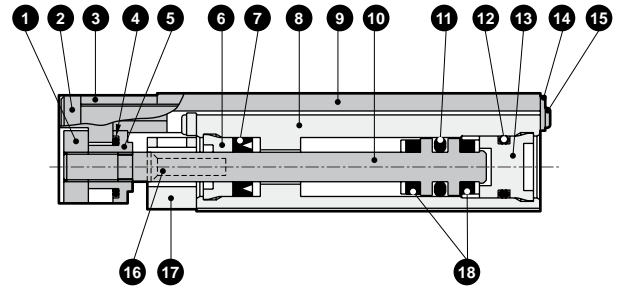
- A** Bore size: φ 6 mm
- B** Stroke length: 10 mm
- C** Piping direction: Right viewed from rod end
- D** Switch model no.: Proximity switch F2H, lead wire 1m
- E** Switch quantity: One on rod end
- F** Option: Dowel pin attached (2 pc.)
- G** Clean room specifications: Vacuum treatment

Internal structure and parts list

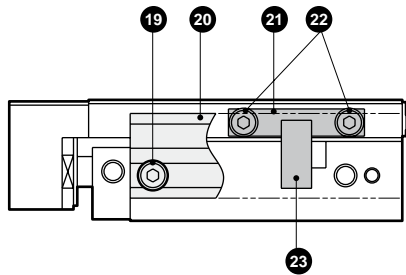
● LCM-4.5-P73



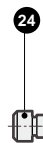
● LCM-6, 8-P73



● LCM-4.5 to 8-F-P73 with magnet/switch rail



• Dowel pin



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Floating bush A	Stainless steel		13	Guard	Acetar resin	
2	Bolt	Stainless steel		14	Stop plate	Stainless steel	
3	End plate	Aluminum alloy		15	Machine screw	Stainless steel	
4	O ring	Nitrile rubber		16	Machine screw	Stainless steel	
5	Floating bush B	Stainless steel		17	Dust collection block	Aluminum alloy	
6	Rod cover	Acetar resin		18	Cushion rubber	Urethane rubber (φ 6, φ 8)	
7	Rod packing seal	Nitrile rubber		19	Hexagon socket head cap bolt	Stainless steel	
8	Cylinder body	Stainless steel		20	Switch rail	Aluminum alloy	
9	Slide table	Stainless steel		21	Plate	Aluminum alloy	
10	Piston	Stainless steel		22	Hexagon socket head cap bolt	Stainless steel	
11	Piston packing seal	Nitrile rubber		23	Magnet	Plastic	
12	O ring	Nitrile rubber		24	Dowel pin	Steel	

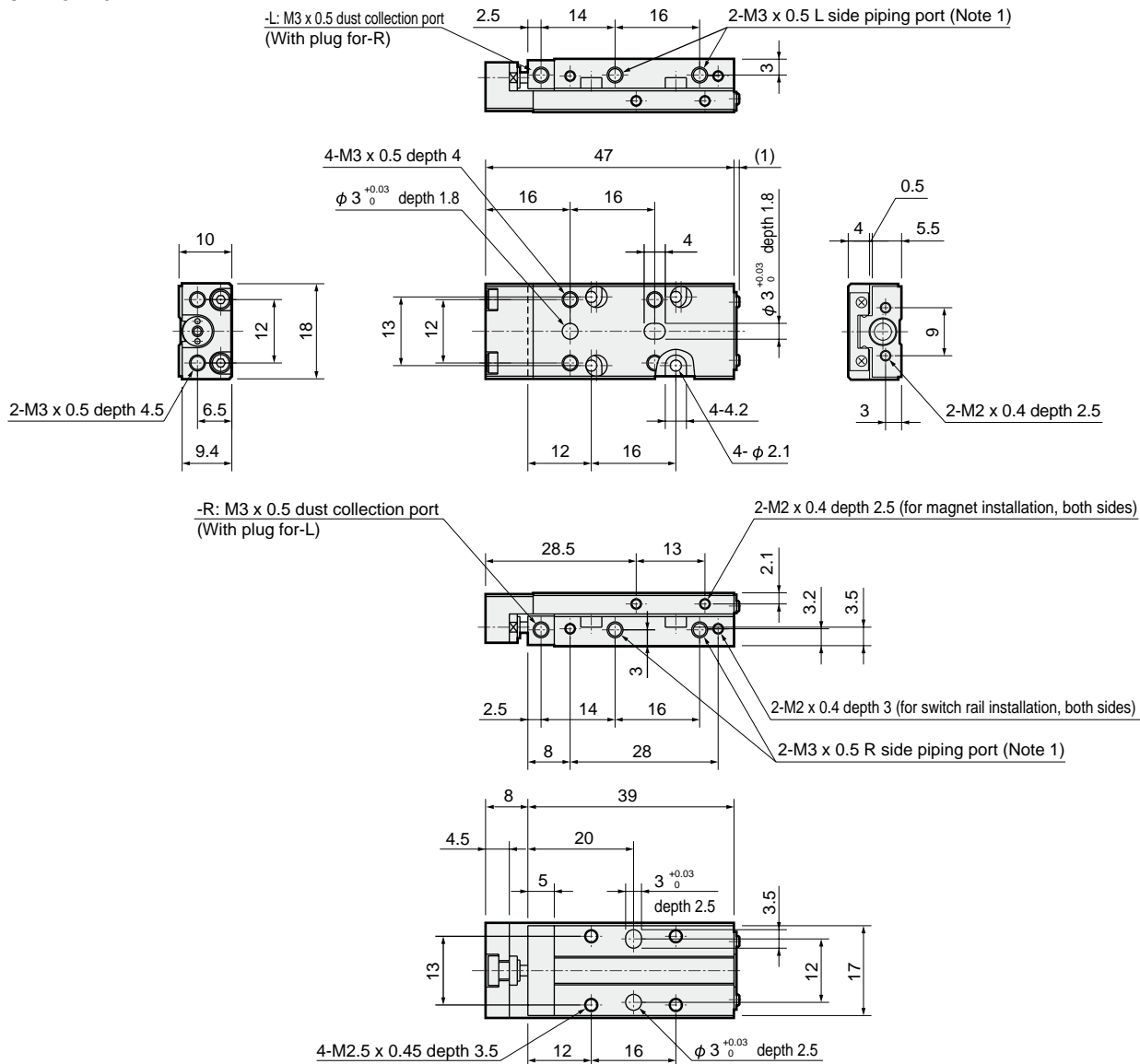
- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM**
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC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

Linear slide cylinder
Combined functions

Dimensions

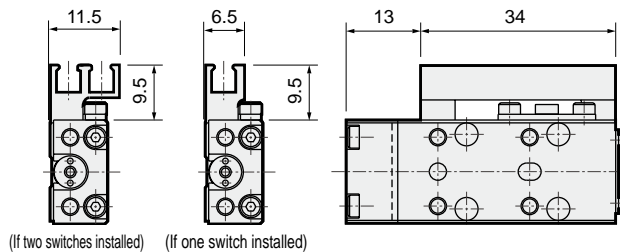


● LCM-4.5-P73

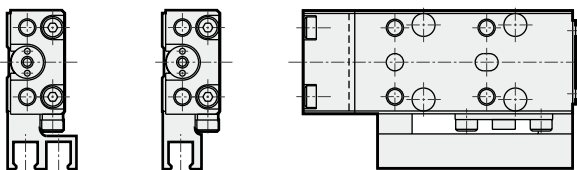


(Note 1) A plug is assembled on the opposite side of piping port indicated in the model no.

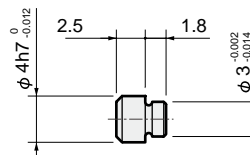
- With magnet/cylinder switch (piping direction: -R)



- With magnet/cylinder switch (piping direction: -L)



- Dowel pin (-J)

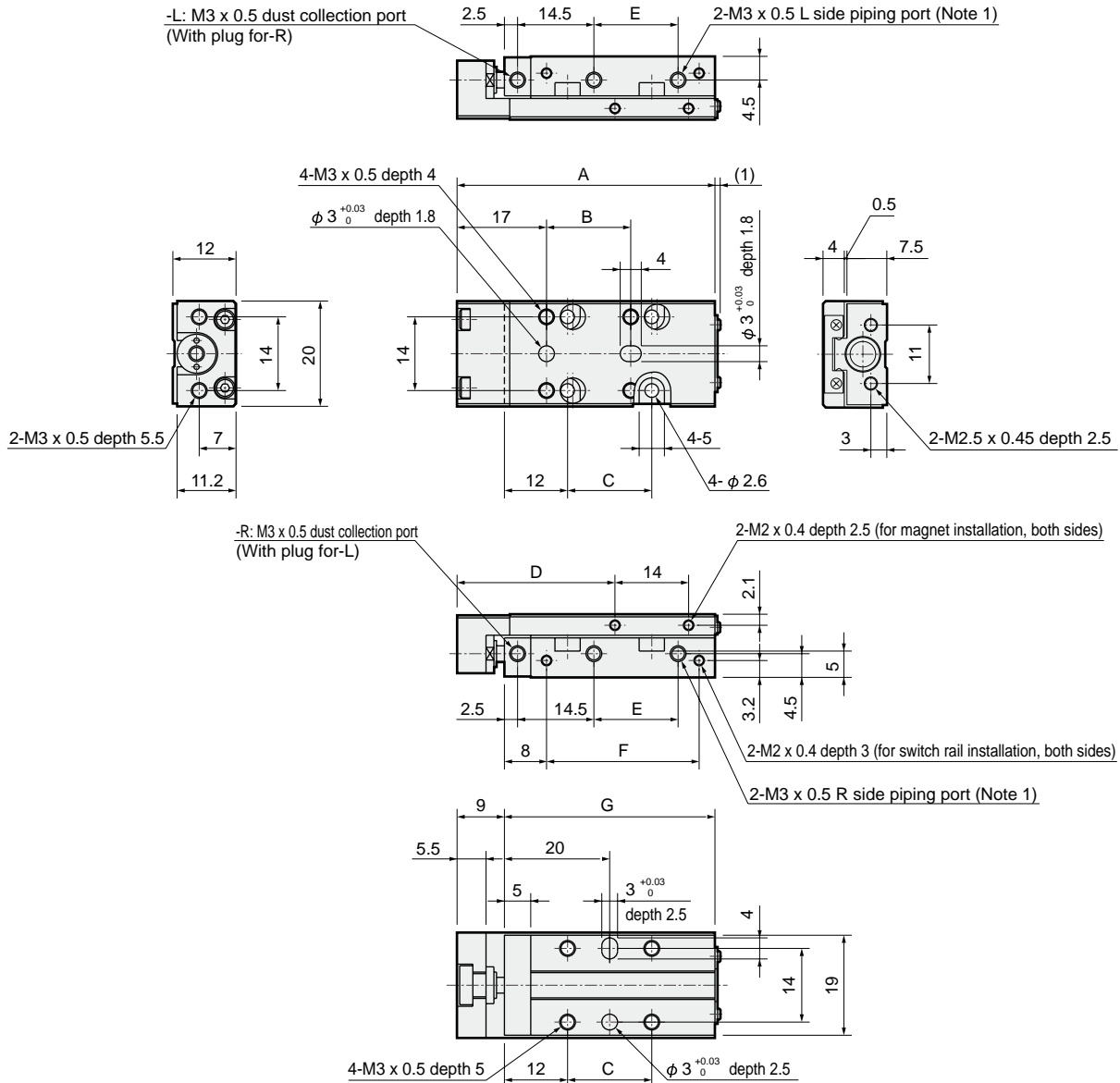


Note: Refer to Page 1815 for switch installation dimensions.

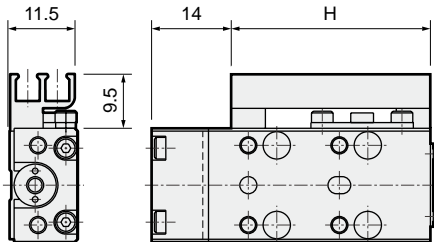
Dimensions



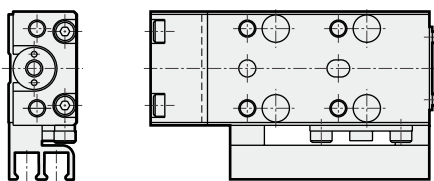
● LCM-6-P73



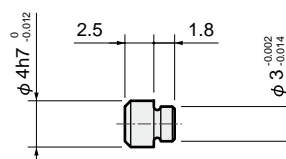
• With magnet/cylinder switch (piping direction: -R)



• With magnet/cylinder switch (piping direction: -L)



• Dowel pin (-J)



Note: Refer to Page 1815 for switch installation dimensions.

Stroke length	A	B	C	D	E	F	G	H
5	49	16	16	30	16	29	40	35
10	49	16	16	30	16	29	40	35
15	54	21	21	35	21	34	45	40

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

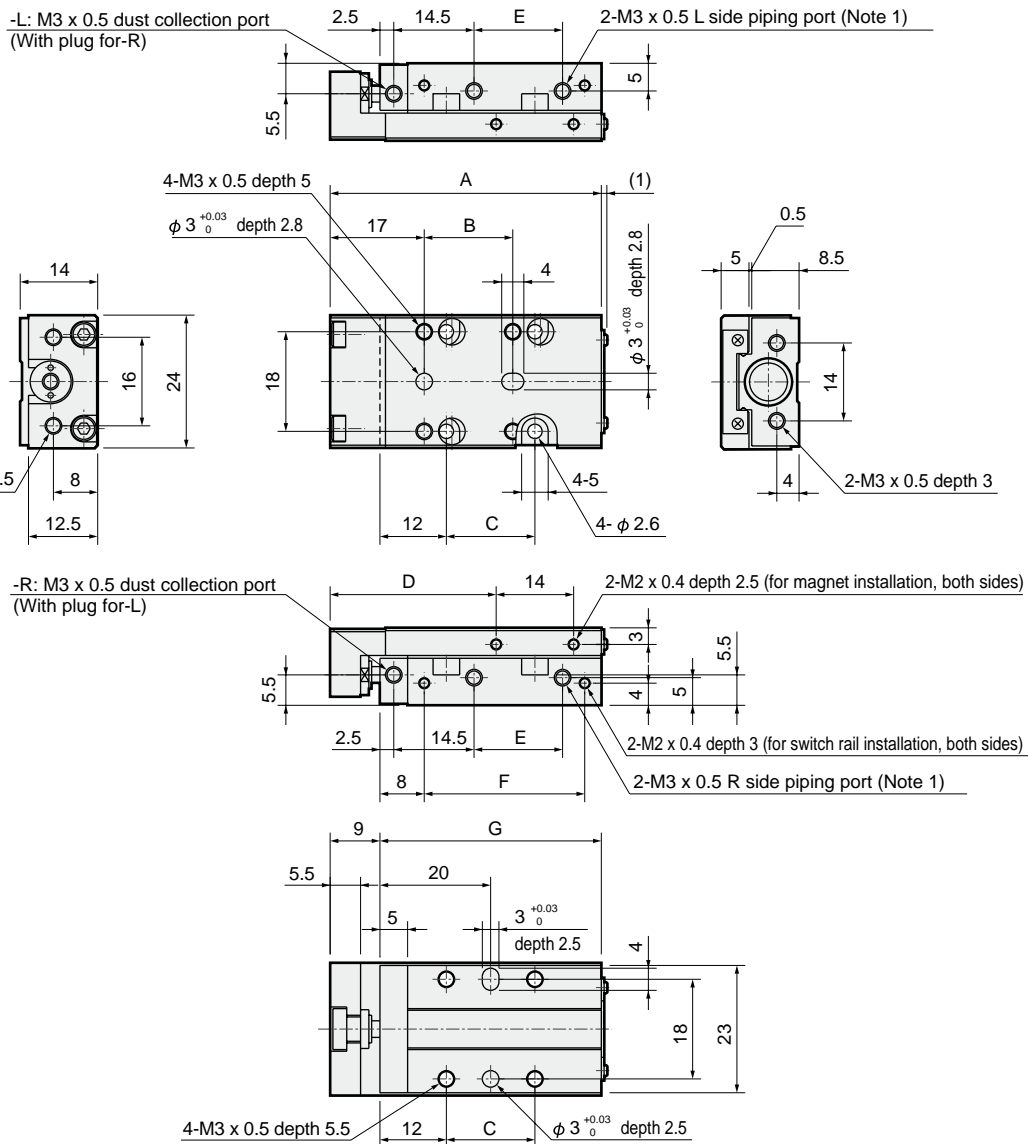
Linear slide cylinder
Combined functions

LCM-P73 Series

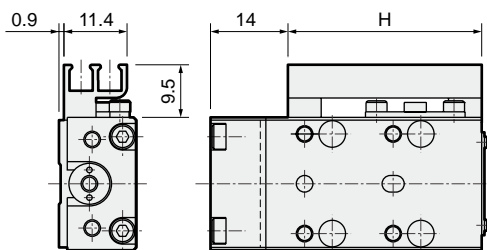
Dimensions



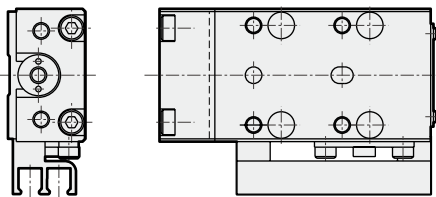
● LCM-8-P73



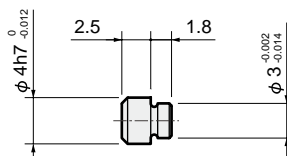
● With magnet/cylinder switch (piping direction: -R)



● With magnet/cylinder switch (piping direction: -L)



● Dowel pin (-J)



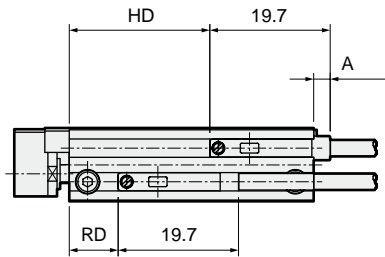
Note: Refer to Page 1815 for switch installation dimensions.

Stroke length	A	B	C	D	E	F	G	H
5	49	16	16	30	16	29	40	35
10	49	16	16	30	16	29	40	35
15	59	26	26	40	26	39	50	45
20	59	26	26	40	26	39	50	45

- SCP*2
- CMK2
- CMA2
- LCM-8-P73
- 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

LCM Series common switch installation, projection dimensions

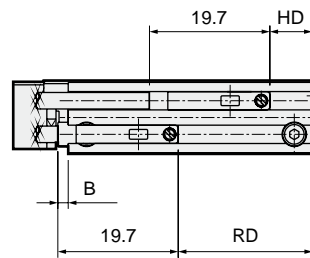
- For rear lead wire outlet



Bore size (mm)	Stroke length	RD	HD	A	
				1 color indicator type	2 color indicator type
φ 4.5	5	12	17	2.7	7.2
	10	7	17		
φ 6	5	13	18		
	10	8	18		
	15	8	23		
φ 8	5	13	18		
	10	8	18		
	15	13	28		
	20	8	28		

(Projecting length for axial lead wire)

- For front lead wire outlet



Bore size (mm)	Stroke length	RD	HD	B	
				1 color indicator type	2 color indicator type
φ 4.5	5	12	7	-	-
	10	17		1.7	6.2
φ 6	5	12	7	-	-
	10	17		1.7	6.2
	15	22		1.7	6.2
φ 8	5	12	7	-	-
	10	17		1.7	6.2
	15	22		-	-
	20	27		1.7	6.2

(Projecting length for axial lead wire)

- 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

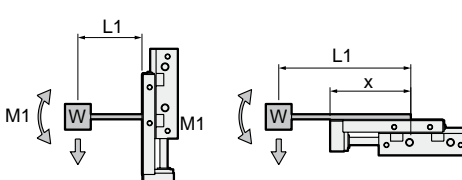
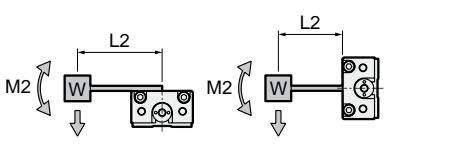
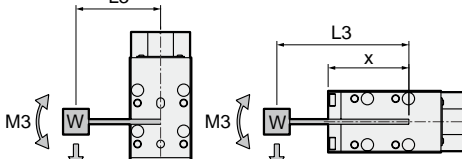
Ending

Linear slide cylinder
Combined functions

STEP-1

Confirm that the load moment in each direction is below the allowable value in all strokes.

• Direction of moment guide, center position X

Direction	Fig.	Formula
M1 moment		$M1 = L1 \times W$
M2 moment		$M2 = L2 \times W$
M3 moment		$M3 = L3 \times W$

• Allowable moment

Model no.	M1	M2	M3
LCM-*-4.5	0.24	0.22	0.29
LCM-*-6	0.28	0.23	0.34
LCM-*-8	0.28	0.38	0.34

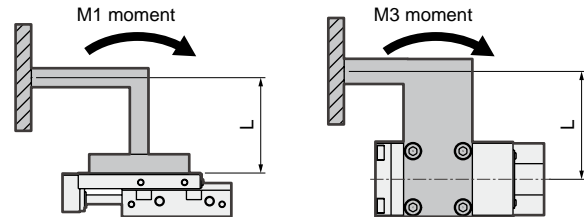
N·m

• Guide center position dimensions

Model no.	Stroke length	X		
		Standard	With buffer	Clean room spec.
LCM-*-4.5	5	30	40	35
	10			
LCM-*-6	5	31.5	41.5	36.5
	10			
	15			
LCM-*-8	5	31.5	41.5	36.5
	10			
	15	41.5	51.5	46.5
	20			

mm

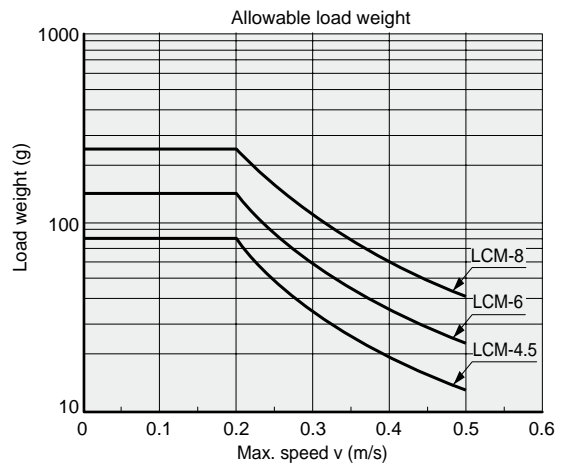
* If the workpiece is contacted at a point offset from the guide section in the middle of the thrust, a large moment may be generated depending on the thrust.



STEP-2

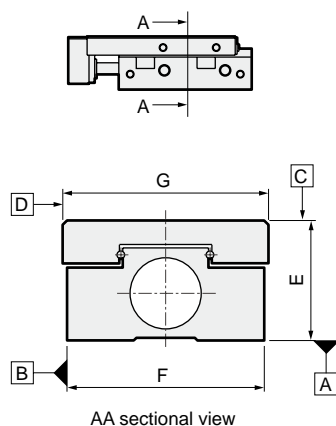
Confirm that dynamic energy from cylinder load weight and piston speed is less than allowable energy absorption.

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}



Technical data

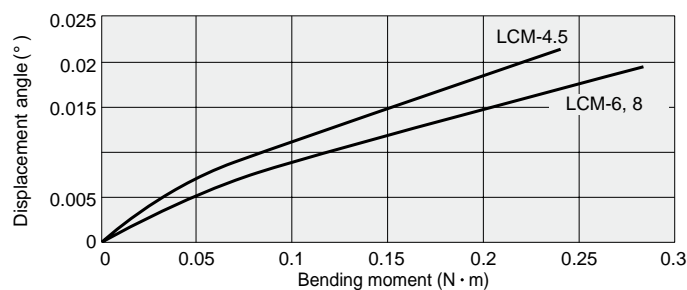
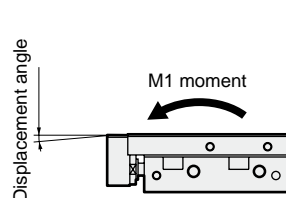
Precision of slide table



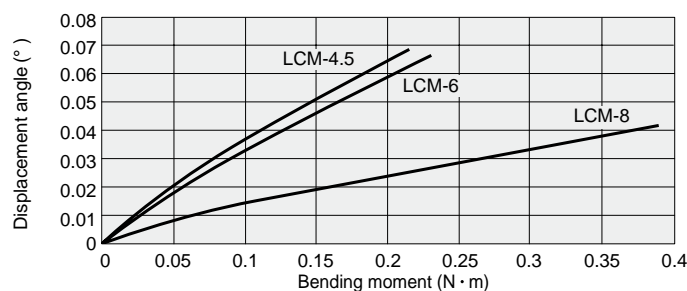
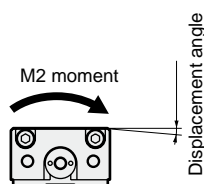
Descriptions		LCM-*-4.5 to 8	mm
Parallelism	C plane against A plane	0.03	
	D plane against B plane	0.03	
Sliding parallelism	C plane against A plane	0.005	
	D plane against B plane	0.005	
Tolerance of E		±0.05	
Tolerance of F		±0.05	
Tolerance of G		±0.05	

Displacement angle of slide table caused by bending moment (reference value)

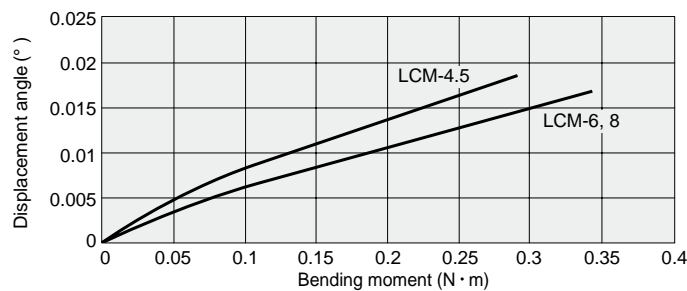
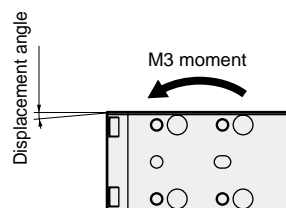
M1 moment



M2 moment



M3 moment



- 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