

LCM

Linear Slide Cylinder

ø4.5, ø6, ø8

With Linear Guide



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With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

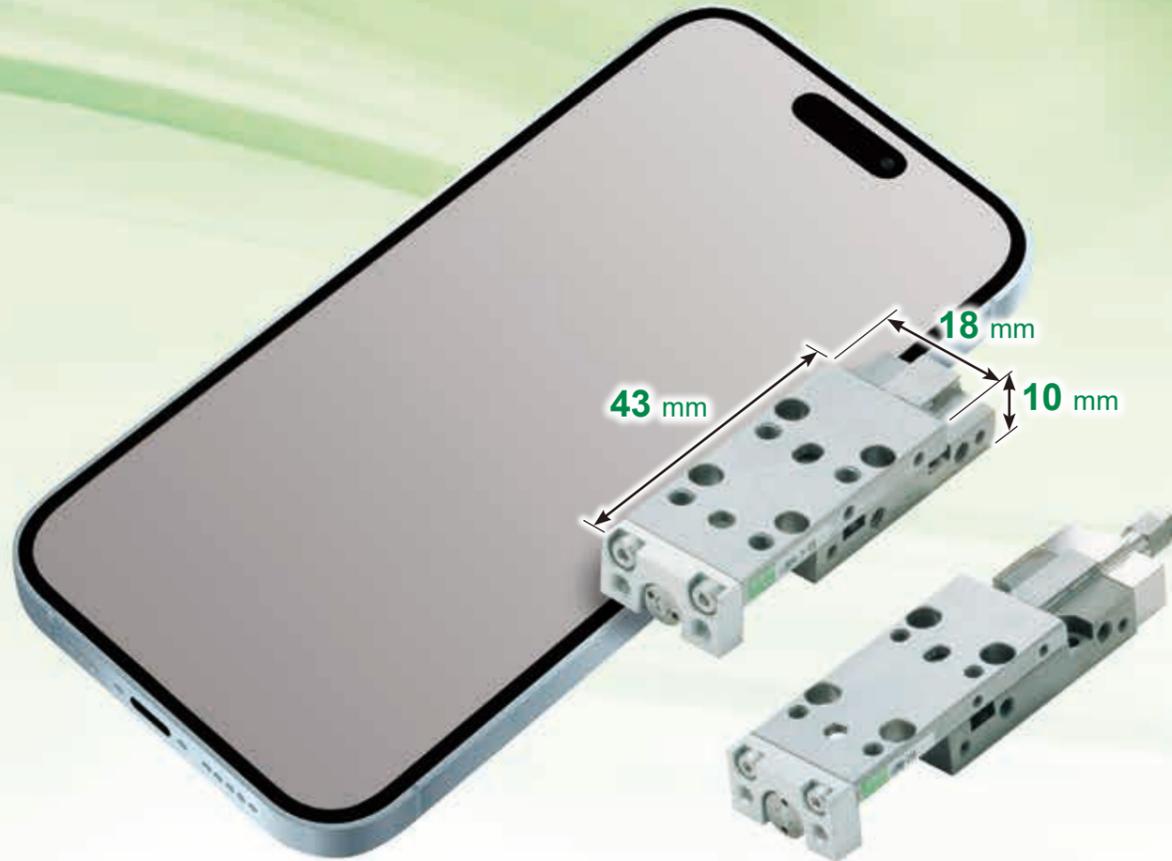
Cylinder Switch

Ending

5

Compact, High-Precision Actuator

Linear slide cylinder LCM series, combining high precision and rigidity in an extremely compact size. (ø4.5, ø6, ø8)



Ideal for high-precision positioning

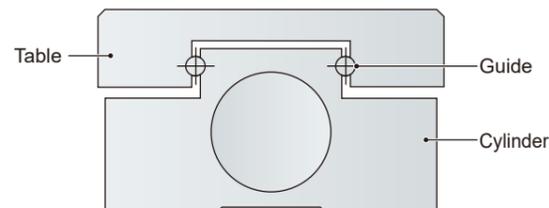
Possesses high accuracy with running parallelism of 0.005 mm* and mounting parallelism of 0.03 mm. Ideal for positioning.
* Some are 0.006 mm. For details, see P. 47.

Running parallelism **0.005 mm**

Mounting parallelism **0.03 mm**

Pursuit of extreme miniaturization

The cylinder body, linear guide, and slide table are integrated to pursue the ultimate in miniaturization and compactness.



Compatible with narrow spaces

The size allows for installation even in narrow spaces, expanding placement flexibility.

Workpiece can be mounted on 2 surfaces

Workpieces can be directly mounted on the top and front surfaces of the table using pre-drilled mounting holes.

Highly reliable stainless steel construction

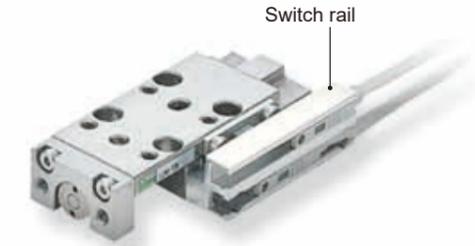
Corrosion-resistant stainless steel is used for the cylinder body and slide table.

Abundant variations

A wide variety of variations are available, such as stroke adjustment type and side mount type.

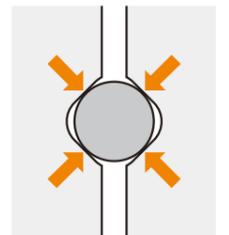
2-color switch can be mounted

A 2-color indication type has been added to the ultra-compact switch F type, making it mountable.



Design resistant to loads

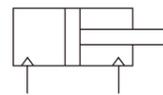
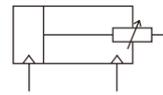
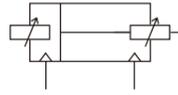
Adopts a linear guide that contacts at 4 points. Can handle loads from all directions.



LCM Series Product Lineup

Model variations	Tube I.D.	Stroke (mm)				
		5	10	15	20	30
 Double acting/ single rod LCM	ø4.5	●	●	●	●	●
	ø6	●	●	●	●	●
	ø8	●	●	●	●	●
 Double acting/ stroke adjustable (Push) LCM-P	ø4.5	●	●	●	●	●
	ø6	●	●	●	●	●
	ø8	●	●	●	●	●
 Double acting/ stroke adjustable (Push/pull) LCM-R	ø4.5	●	●	●	●	●
	ø6	●	●	●	●	●
	ø8	●	●	●	●	●
 Double acting/ side mounting LCM-A	ø4.5	●	●	●	●	●
	ø6	●	●	●	●	●
	ø8	●	●	●	●	●

● : Standard, ◎ : Option, ○ : Custom Products ■ : Not manufacturable

Variation	Model No. Circuit Diagram Symbol	Bore Size (mm)	Standard Stroke (mm)					Option				Switch	Page
			5	10	15	20	30	With buffer	With magnet	With magnet + switch rail	Positioning pin included		
			●	●	■	■	■	B	M	F	J□		
Double Acting/Single Rod Type	LCM 	ø4.5	●	●	■	■	■	○	○	○	○	○	10
		ø6	●	●	●	●	●	○	○	○	○	○	
		ø8	●	●	●	●	●	○	○	○	○	○	
Double-acting, Stroke adjustment type (Push)	LCM - P 	ø4.5	●	●	■	■	■	○	○	○	○	○	18
		ø6	●	●	●	●	●	○	○	○	○	○	
		ø8	●	●	●	●	●	○	○	○	○	○	
Double-acting, Stroke adjustment type (Push/Pull)	LCM - R 	ø4.5	●	●	■	■	■	○	○	○	○	○	26
		ø6	●	●	●	●	●	○	○	○	○	○	
		ø8	●	●	●	●	●	○	○	○	○	○	
Double acting, Side mount type	LCM - A 	ø4.5	●	●	■	■	■	○	○	○	○	○	34
		ø6	●	●	●	●	●	○	○	○	○	○	
		ø8	●	●	●	●	●	○	○	○	○	○	

Note) Intermediate strokes cannot be manufactured.

With Linear Guide

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LCX

MSDG

With Linear Guide

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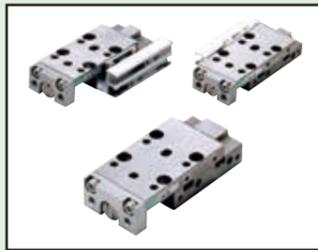
MSDG

Cylinder Switch

Ending

Cylinder Switch

Ending



Linear Slide Cylinder Double Acting, Single Rod Type

LCM Series

● Bore size: $\phi 4.5$, $\phi 6$, $\phi 8$

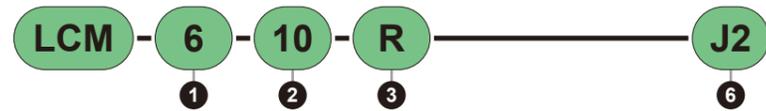
Circuit Diagram Symbol



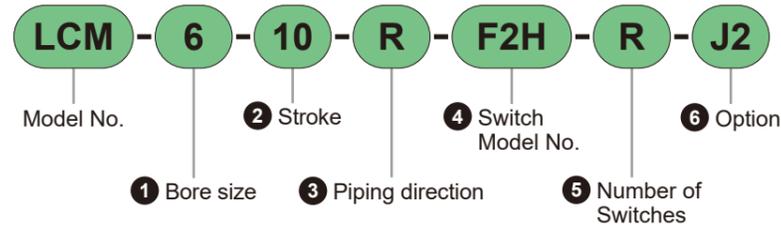
LCM Series Model No. Notation Method

Model No. Notation Method

Without Switch
(Without magnet for switch)



With Switch
(Built-in magnet for switch)



1 Bore Size (mm)

Code	Content
4.5	$\phi 4.5$
6	$\phi 6$
8	$\phi 8$

2 Stroke (mm)

Code	Bore size		
	$\phi 4.5$	$\phi 6$	$\phi 8$
5	●	●	●
10	●	●	●
15		●	●
20		●	●
30		●	●

3 Piping direction

Code	Content
R	Right side when viewed from rod side
L	Left side when viewed from rod side

4 Switch Model No.

For switch details, please refer to P. 753. Switches are included to the product and shipped.

Contact	Indicator Lamp Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead Wire *1		Image
			AC	DC	AC	DC	Straight	L-shape	
Solid State	1-Color	2-wire	-	10 to 30	-	5 to 20	-	F2S□	
		3-wire (NPN)	-	30 or less	-	50 or less	-	F3S□	
		2-wire	-	10 to 30	-	5 to 20 *2	F2H□	F2V□	
		3-wire (NPN)	-	30 or less	-	50 or less	F3H□	F3V□	
	1-Color (Custom order)	3-wire (PNP)	-	30 or less	-	50 or less	F3PH□	F3PV□	
	2-Color	2-wire	-	24±10%	-	5 to 20	F2YH□	F2YV□	
3-wire (NPN)		-	30 or less	-	50 or less	F3YH□	F3YV□		

*Lead wire length

Code	Content
Blank	1 m (Standard)
3	3 m (Option)

Example) Lead wire length
1 m F2S
3 m F2S [3]

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length" table.

*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)

*3: Switches other than the model Nos. listed above are also available. (Custom Product)
For details, see P. 753.

5 Number of Switches

Code	Content
R	With 1 on Rod Side
H	With 1 on Head Side
D	With 2 pcs

6 Option

Code	Content	Image
B	With buffer	
M	With magnet	
F1	Magnet + Switch rail (1 switch groove)	
F2	Magnet + Switch rail (2 switch grooves)	
J□	Positioning pin included (*Number of pins)	

*1: If a switch model No. is specified, selection is not necessary.

*2: Selectable only for $\phi 4.5$.

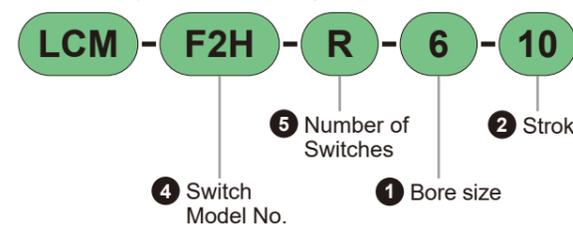
Clean Specification (Catalog No. CB-033SAA)

● Dust prevention structure usable in cleanrooms

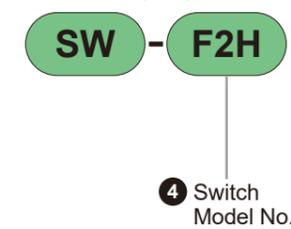
LCM-.....-P7□

Switch Single Unit Model No. Notation Method

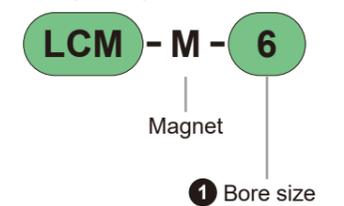
● Switch body + Switch rail + Magnet



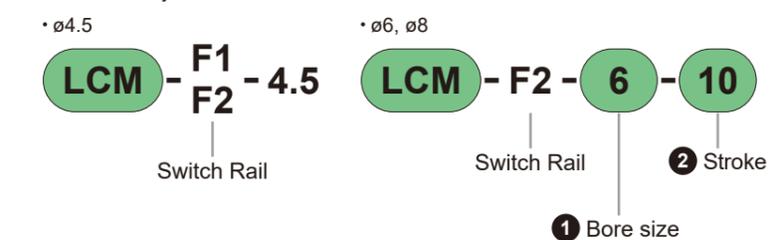
● Switch body only



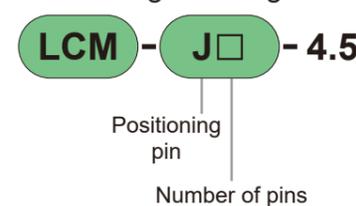
● Magnet only



● Switch rail only



Positioning Pin Single Item Model No. Notation Method



With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

With Linear Guide

LCM

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LCG

LCW

LCX

MSDG

Cylinder Switch

Ending

Cylinder Switch

Ending

Specifications

Item	LCM			
Bore size	mm	ø4.5	ø6	ø8
Actuation method	Double Acting Type			
Operating Fluid	Compressed Air			
Max. Working Pressure	MPa	0.7		
Min. Operating Pressure	MPa	0.2	0.15	
Proof Pressure	MPa	1.05		
Ambient Temperature	°C	0 to 60		
Port Size	M3			
Stroke tolerance	mm	+1.0		
Operating Piston Speed	mm/s	30 to 500		
Cushion	None		With Rubber Cushion	
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)			
Allowable Absorbed Energy	J	Refer to the table on P. 48.		

With buffer specification

Item	With buffer (B)	
Buffer Stroke	mm	4 (MAX)
Buffer part spring load	At SET	N
	During operation	N

Stroke

Bore size (mm)	Standard Stroke (mm)	Minimum stroke with switch (mm)
ø4.5	5, 10	5
ø6	5, 10, 15, 20, 30	
ø8	5, 10, 15, 20, 30	

Note) Strokes other than standard are not available.

Cylinder Weight

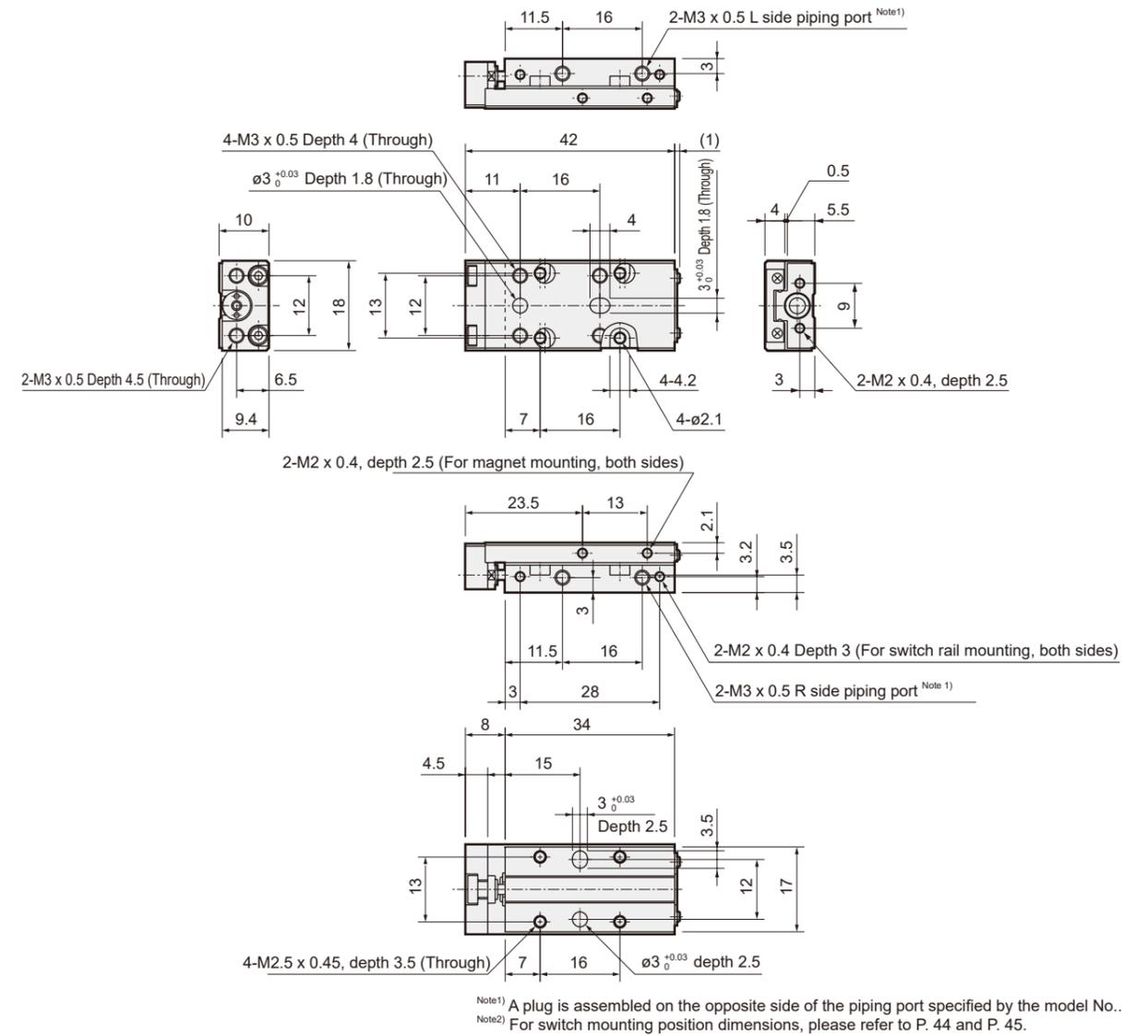
Stroke (mm)	5										10		15		20		30		Added Weight	
	Magnet + Switch rail		Magnet + Switch rail		Magnet + Switch rail		Magnet + Switch rail		Magnet + Switch rail		Magnet + Switch rail		Magnet + Switch rail		Magnet + Switch rail		With buffer	Weight per switch		
	None	Available																		
ø4.5	42	46	42	46	-	-	-	-	-	-	-	-	-	-	-	3	Refer to the mass described in the switch specifications on P. 753			
ø6	58	63	58	63	66	72	74	80	90	97	4									
ø8	83	88	83	88	104	110	104	110	125	132	5									

Theoretical Thrust Table

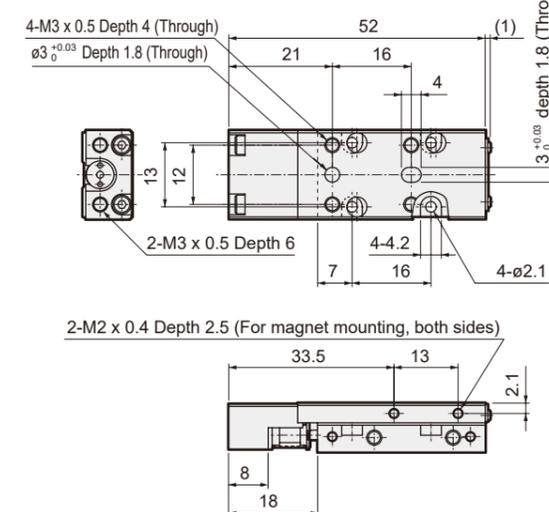
Bore Size (mm)	Operating Direction	Operating Pressure MPa					
		0.2	0.3	0.4	0.5	0.6	0.7
ø4.5	Push	3.2	4.8	6.4	8.0	9.5	11.1
	Pull	2.6	3.8	5.1	6.4	7.7	8.9
ø6	Push	5.7	8.5	11.3	14.1	17.0	19.8
	Pull	4.2	6.4	8.5	10.6	12.7	14.8
ø8	Push	10.1	15.1	20.1	25.1	30.2	35.2
	Pull	8.6	13.0	17.3	21.6	25.9	30.2

Outline dimension drawing (Bore size: ø4.5)

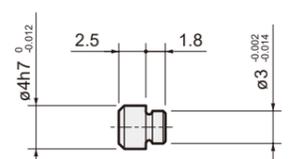
●LCM-4.5



• With Buffer (-B)

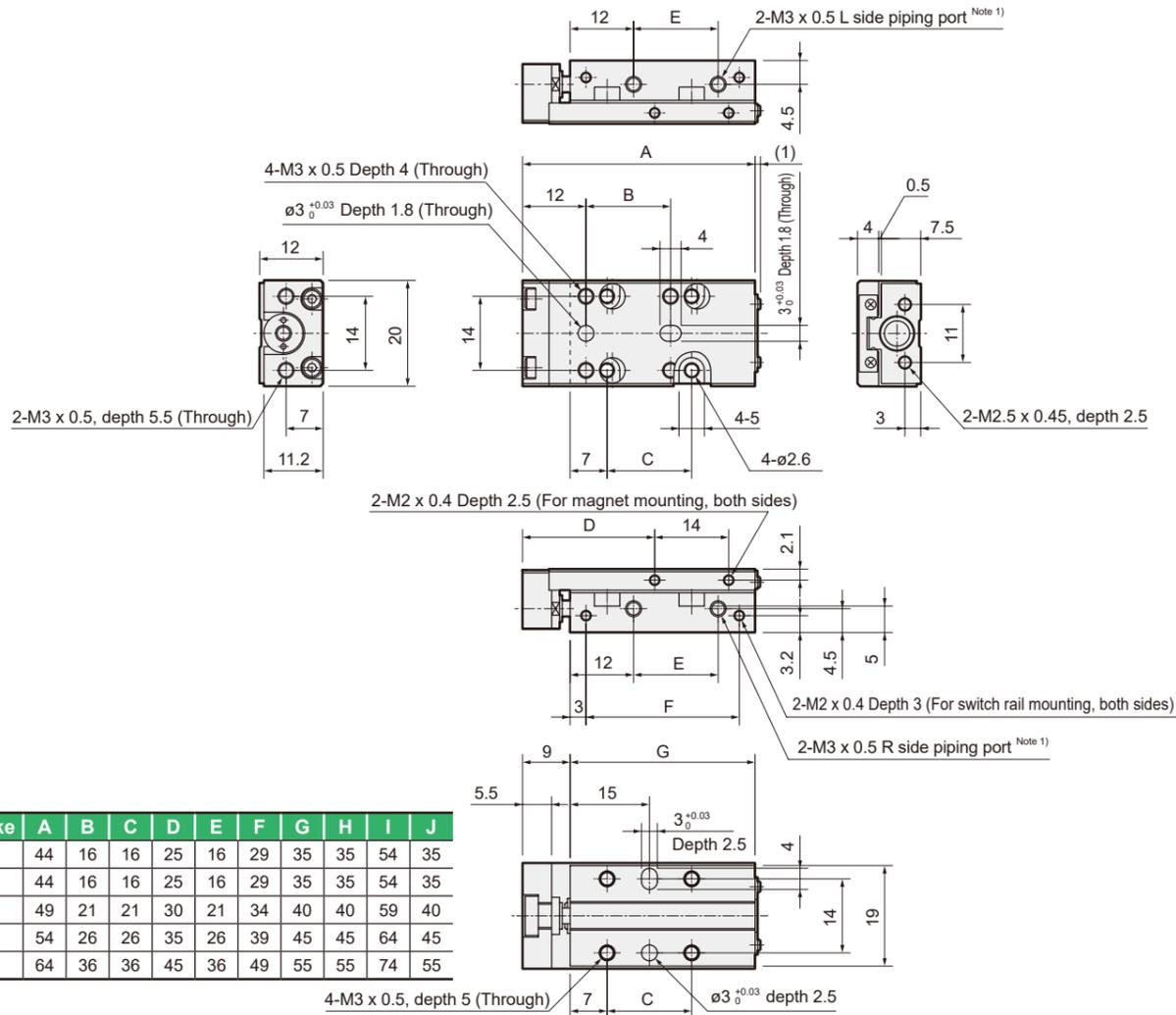


• Positioning pin (-J)

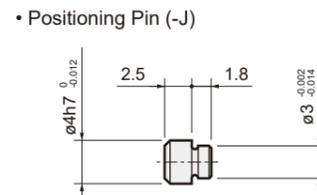
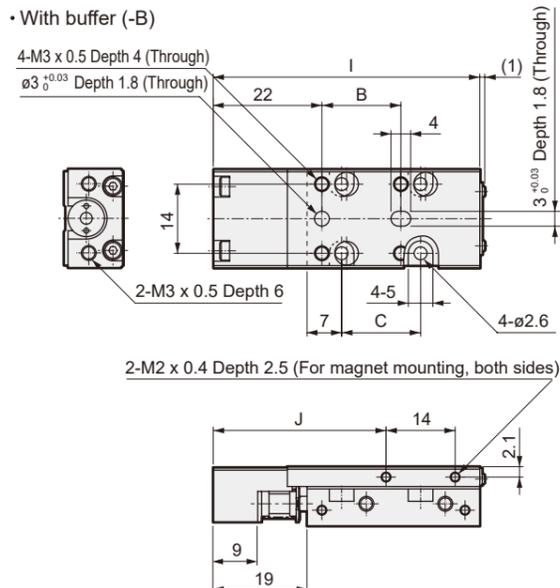


Outline dimension drawing (Bore size: $\phi 6$)

● LCM-6



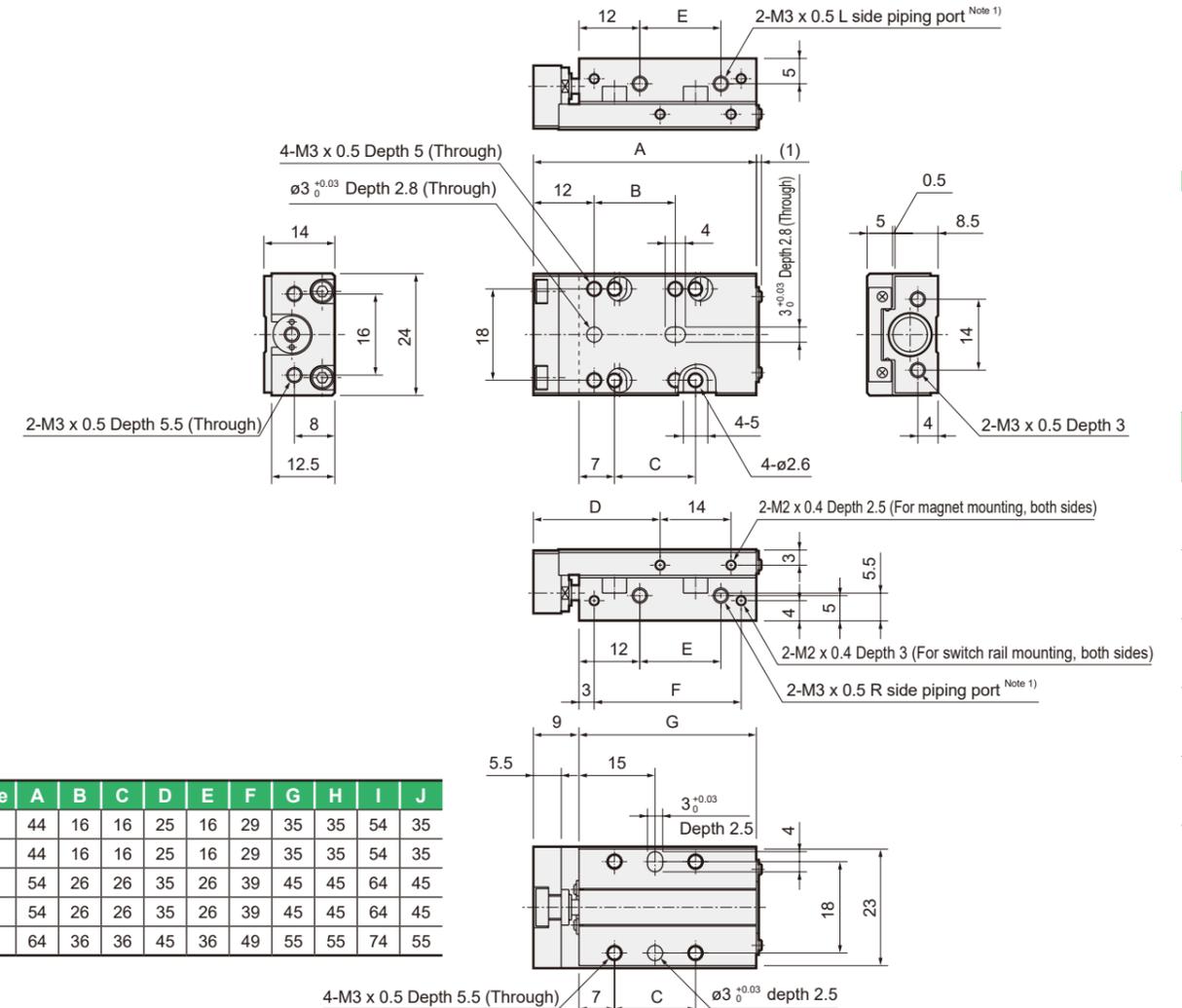
Note1) A plug is assembled on the opposite side of the piping port specified by the model No.
 Note2) For switch mounting position dimensions, see P. 44 and P. 45.



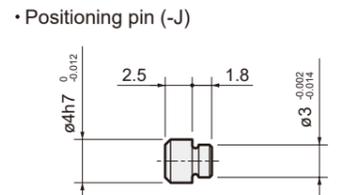
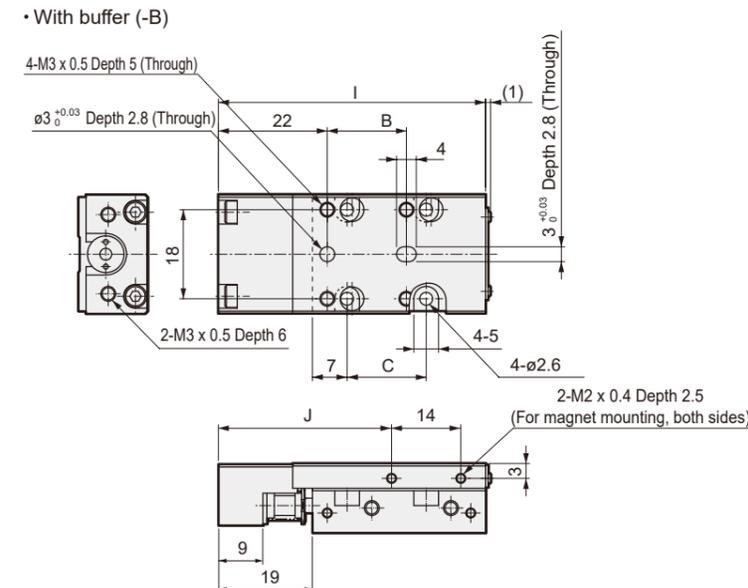
Outline Dimension Drawing

Outline dimension drawing (Bore size: $\phi 8$)

● LCM-8

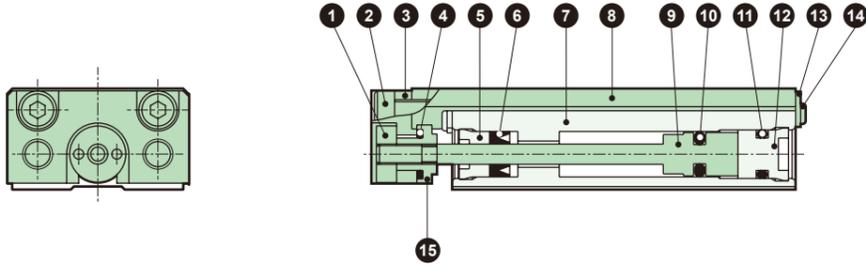


Note1) A plug is assembled on the opposite side of the piping port specified by the model No.
 Note2) For switch mounting position dimensions, see P. 44 and P. 45.

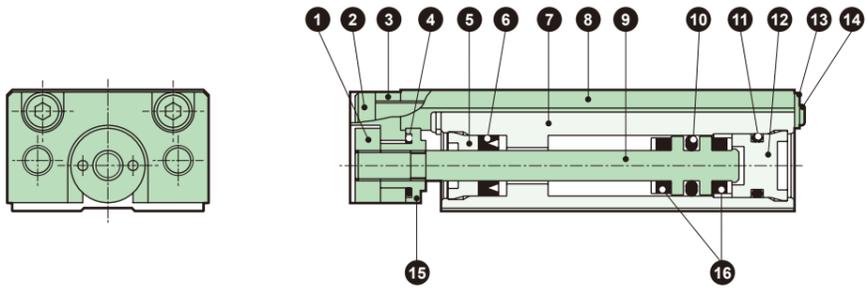


Internal Structure Diagram/Material

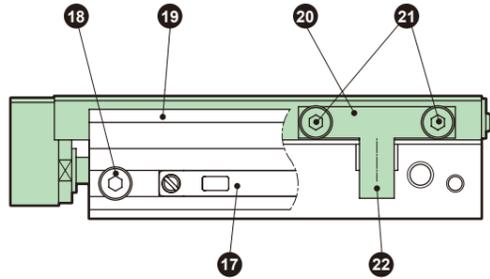
● LCM-4.5



● LCM-6.8



● LCM-4.5 to 8 With magnet and switch rail



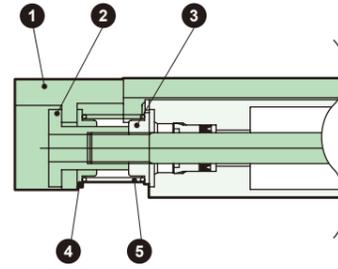
Do not disassemble

Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Floating bush A	Stainless Steel		13	Stopper plate	Stainless Steel	
2	Hexagon Socket Head Cap Screw	Stainless Steel		14	Machine screw	Stainless Steel	
3	End plate	Aluminum Alloy		15	Floating bush B	Stainless Steel	
4	O-ring	Nitrile rubber		16	Cushion Rubber	Urethane Rubber	
5	Rod Cover	Polyacetal		With Switch			
6	Rod Packing	Nitrile Rubber		17	Switch		
7	Cylinder Body	Stainless Steel		18	Hexagon Socket Head Cap Screw	Stainless Steel	
8	Slide table	Stainless Steel		19	Switch Rail	Aluminum Alloy	
9	Piston	Stainless Steel		20	Plate	Aluminum Alloy	
10	Piston Packing	Nitrile Rubber		21	Hexagon Socket Head Cap Screw	Stainless Steel	
11	O-ring	Nitrile Rubber		22	Magnet	Plastic	
12	Cover	Polyacetal					

Internal Structure Diagram/Material

Internal Structure Diagram/Material

● LCM-4.5 to 8 With buffer



• Positioning pin



Part No.	Part Name	Material	Remarks
1	End plate	Aluminum Alloy	
2	Floating bush A	Stainless Steel	
3	Floating bush B	Stainless Steel	
4	Spring Retainer	Copper Alloy	
5	Coil Spring	Stainless Steel	

Part No.	Part Name	Material	Remarks
1	Positioning pin	Steel	

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With Linear Guide

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LCX

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Cylinder Switch

Ending

Cylinder Switch

Ending



Linear Slide Cylinder Double Acting, Stroke Adjustment Type (Push)

LCM-P Series

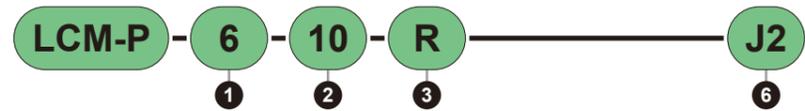
● Bore size : $\phi 4.5$, $\phi 6$, $\phi 8$

Circuit Diagram Symbol

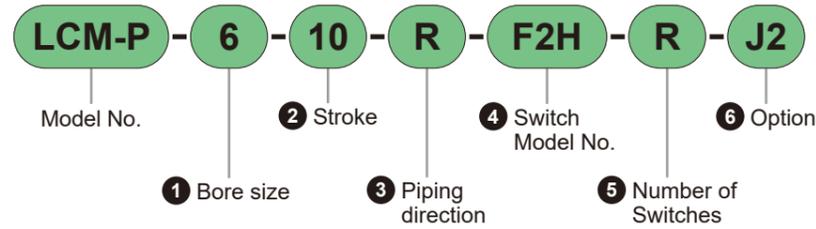


Model No. Notation Method

Without Switch
(Without magnet for switch)



With Switch
(Built-in magnet for switch)



1 Bore Size (mm)

Code	Content
4.5	$\phi 4.5$
6	$\phi 6$
8	$\phi 8$

2 Stroke (mm)

Code	Bore size		
	$\phi 4.5$	$\phi 6$	$\phi 8$
5	●	●	●
10	●	●	●
15		●	●
20		●	●
30		●	●

3 Piping direction

Code	Content
R	Right side when viewed from rod side
L	Left side when viewed from rod side

4 Switch Model No.

For switch details, please refer to P. 753. Switches are included to the product and shipped.

Contact	Indicator Lamp Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead Wire *1		Image
			AC	DC	AC	DC	Straight	L-shape	
Solid State	1-Color	2-wire	-	10 to 30	-	5 to 20	-	F2S□	
		3-wire (NPN)	-	30 or less	-	50 or less	-	F3S□	
		2-wire	-	10 to 30	-	5 to 20 *2	F2H□	F2V□	
		3-wire (NPN)	-	30 or less	-	50 or less	F3H□	F3V□	
	1-Color (Custom order)	3-wire (PNP)	-	30 or less	-	50 or less	F3PH□	F3PV□	
	2-Color	2-wire	-	24±10%	-	5 to 20	F2YH□	F2YV□	
		3-wire (NPN)	-	30 or less	-	50 or less	F3YH□	F3YV□	

* Lead wire length

Code	Content
Blank	1 m (Standard)
3	3 m (Option)

Example) Lead wire length
1 m F2S
3 m F2S [3]

*1: For "□" in the switch model No., enter the code selected from the "Lead wire length" table.

*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)

*3: Switches other than the model Nos. listed above are also available. (Custom order)
For details, See P. 753.

5 Number of Switches

Code	Content
R	With 1 on Rod Side
H	With 1 on Head Side
D	With 2 pcs

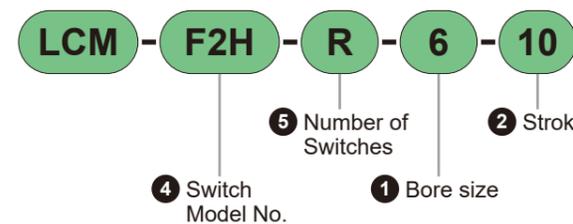
6 Option

Code	Content	Image
B	With buffer	
M	With magnet	
F1	Magnet + Switch rail (1 switch groove)	
F2	Magnet + Switch rail (2 switch grooves)	
J□	Positioning pin included (*Number of pins)	

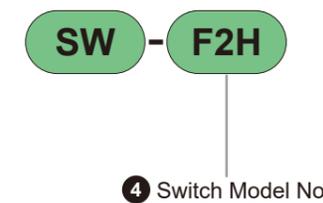
*1: If a switch model No. is specified, selection is not necessary.
*2: Selectable only for $\phi 4.5$.

Switch Single Unit Model No. Notation Method

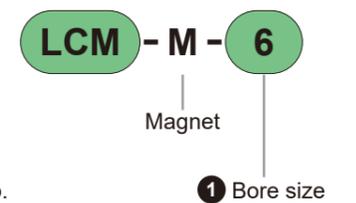
● Switch body + Switch rail + Magnet



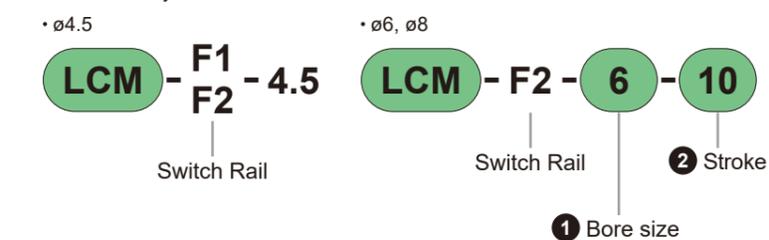
● Switch body only



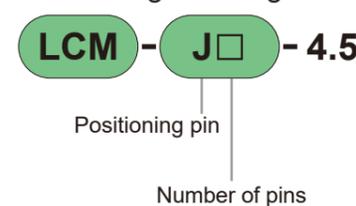
● Magnet only



● Switch rail only



Positioning Pin Single Item Model No. Notation Method



With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

Cylinder Switch

Ending

Cylinder Switch

Ending

Specifications

Item	LCM-P		
Bore size	mm	ø4.5	ø6 ø8
Actuation method	Double Acting Type		
Operating Fluid	Compressed Air		
Max. Working Pressure	MPa	0.7	
Min. Operating Pressure	MPa	0.25	0.2 0.15
Proof Pressure	MPa	1.05	
Ambient Temperature	°C	0 to 60	
Port Size	M3		
Stroke tolerance	mm	+1.0	
		0	
Operating Piston Speed	mm/s	30 to 500	
Cushion	None		
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)		
Stroke adjustment range	mm	-5 to 0	
Repeat positioning accuracy	mm	±0.02	
Allowable Absorbed Energy	J	Refer to the table on P. 48.	

With buffer specification

Item	With buffer (B)	
Buffer Stroke	mm	4 (MAX)
Buffer part spring load	At SET N	0.3
	During operation N	0.7

Stroke

Bore size (mm)	Standard Stroke (mm)	Minimum stroke with switch (mm)
ø4.5	5, 10	5
ø6	5,10,15,20,30	
ø8	5,10,15,20,30	

Note: Strokes other than standard are not available.

Cylinder Weight

Unit: g

Stroke (mm)	5		10		15		20		30		Added Weight	
	Magnet + Switch rail		Magnet + Switch rail		Magnet + Switch rail		Magnet + Switch rail		Magnet + Switch rail		With buffer	Weight per switch
	None	Available										
ø4.5	49	53	49	53	-	-	-	-	-	-	3	Refer to the mass described in the switch specifications on P. 753
ø6	68	73	68	73	77	83	86	92	104	111	4	
ø8	97	102	97	102	120	126	120	126	143	150	5	

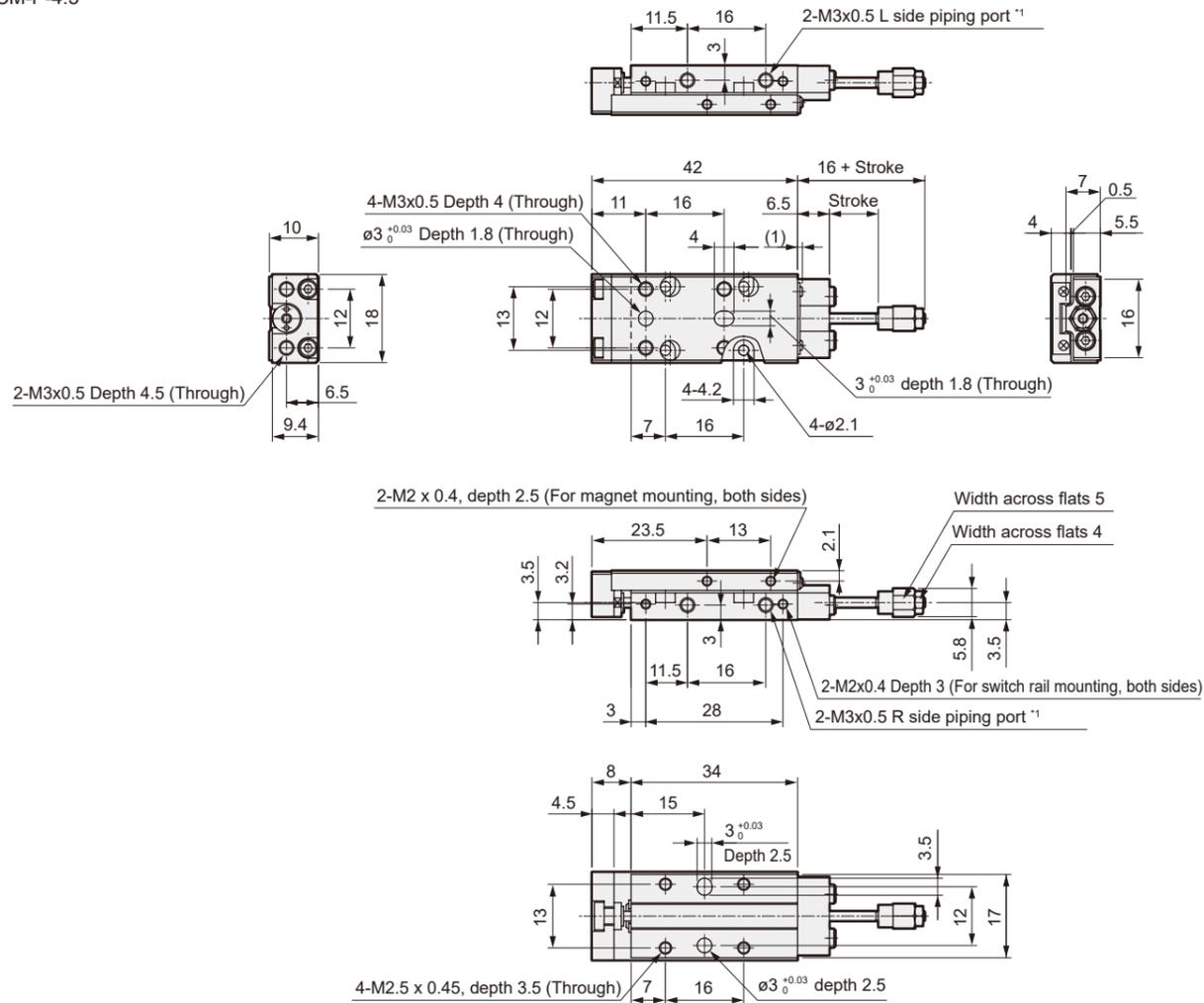
Theoretical Thrust Table

Unit: N

Bore Size (mm)	Operating Pressure MPa					
	0.2	0.3	0.4	0.5	0.6	0.7
ø4.5	-	3.8	5.1	6.4	7.7	8.9
ø6	4.2	6.4	8.5	10.6	12.7	14.8
ø8	8.6	13.0	17.3	21.6	25.9	30.2

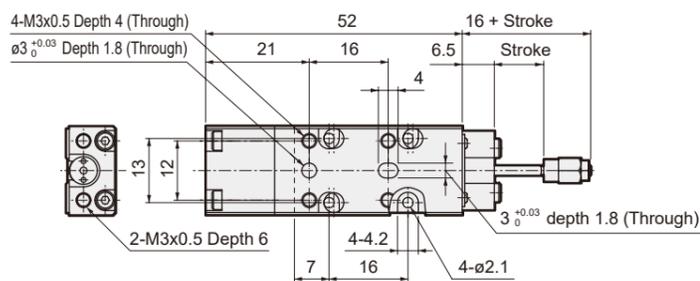
Outline dimension drawing (Bore size: $\phi 4.5$)

● LCM-P-4.5

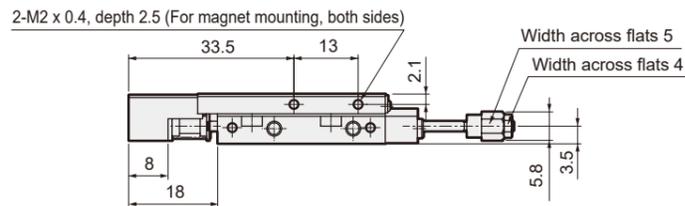
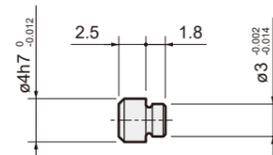


*1: A plug is assembled on the opposite side of the piping port specified by the model No.
*2: For switch mounting position dimensions, please refer to P. 44 and P. 45.

• With Buffer (-B)



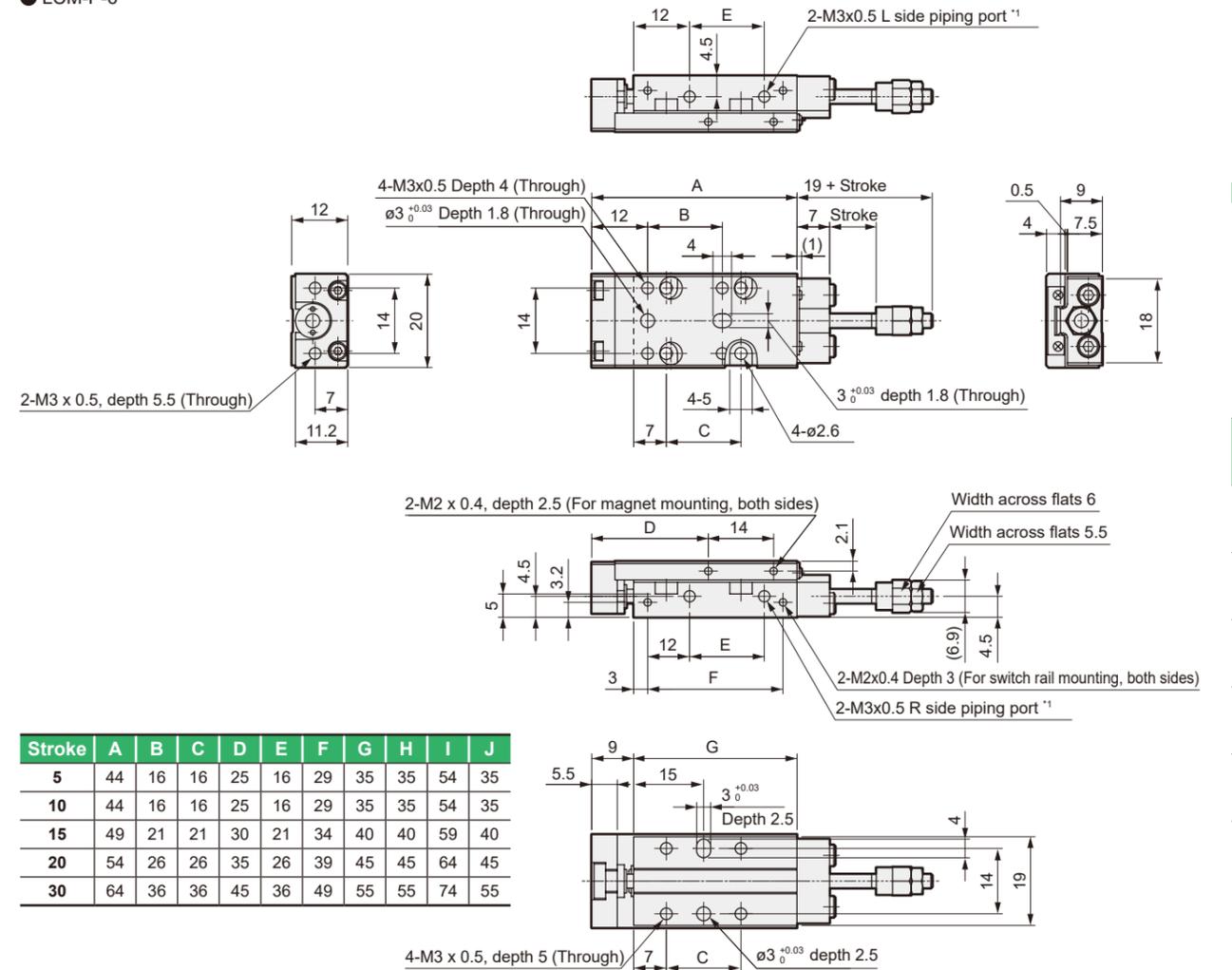
• Positioning Pin (-J)



Outline Dimension Drawing

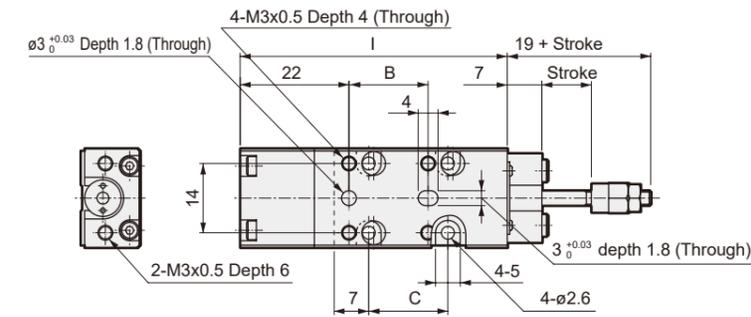
Outline dimension drawing (Bore size: $\phi 6$)

● LCM-P-6

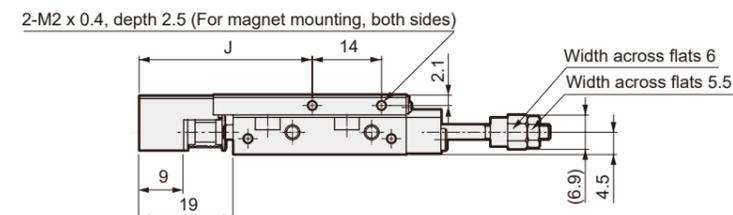
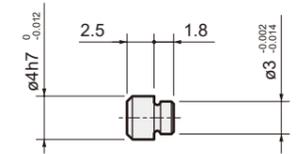


*1: A plug is assembled on the opposite side of the piping port specified by the model No.
*2: For switch mounting position dimensions, please refer to P. 44 and P. 45.

• With Buffer (-B)

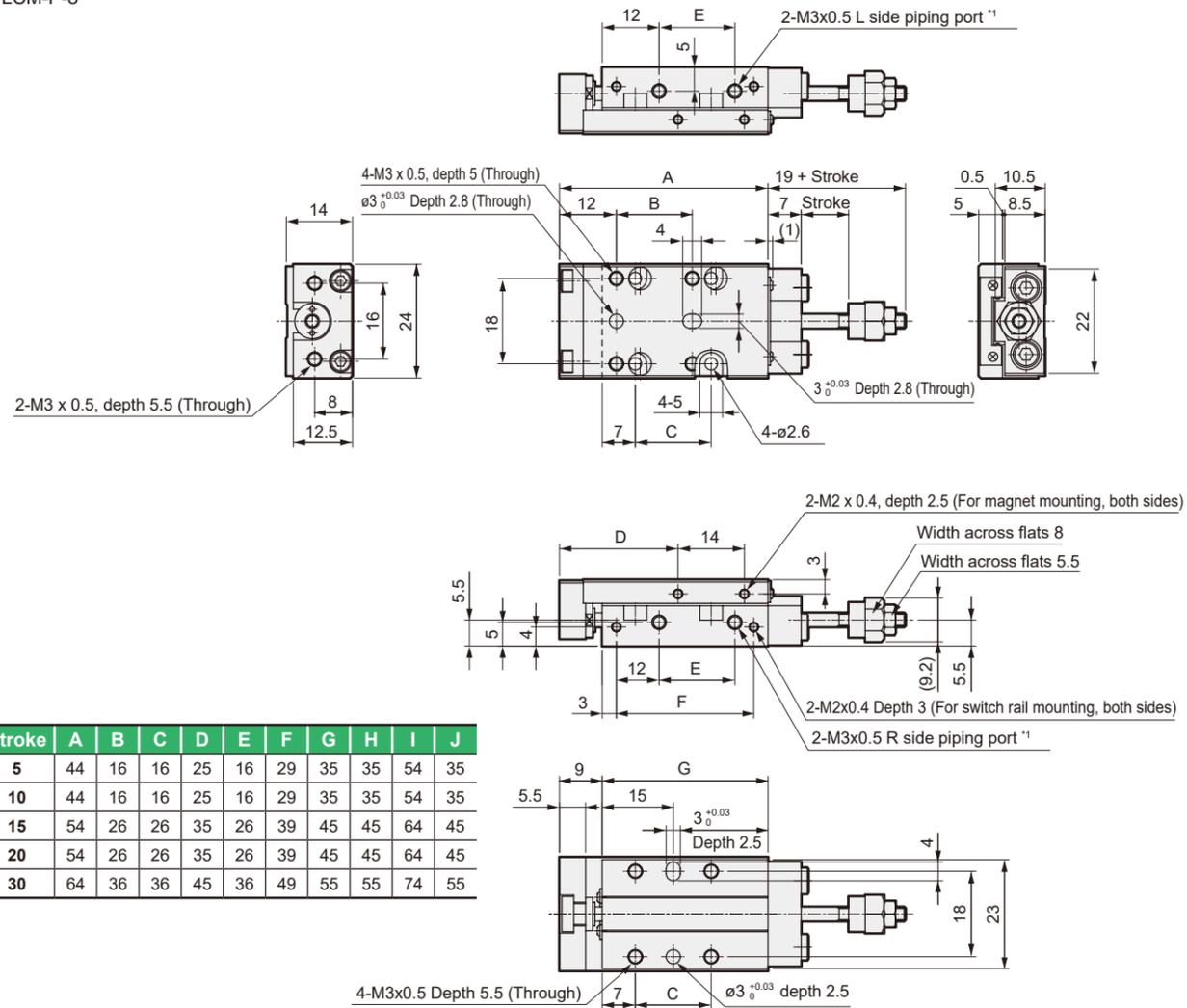


• Positioning Pin (-J)



Outline dimension drawing (Bore size: $\phi 8$)

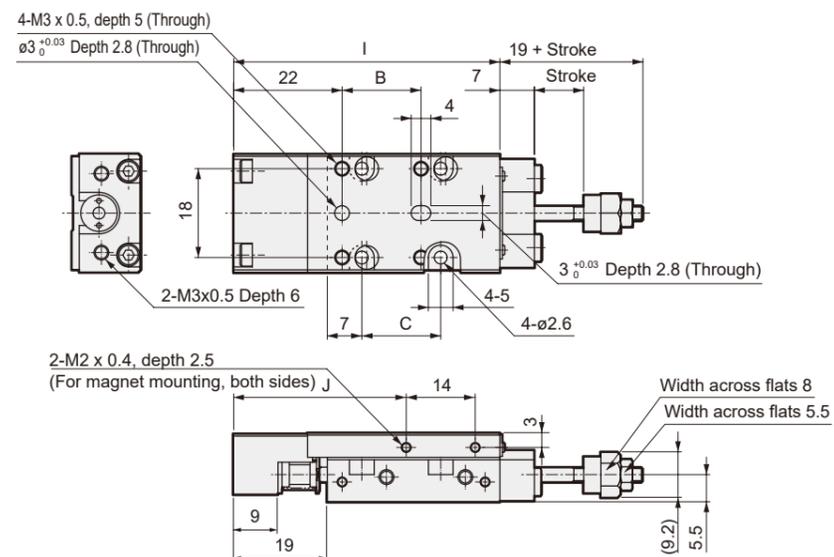
● LCM-P-8



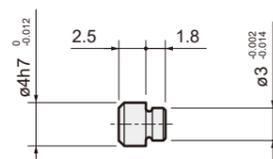
Stroke	A	B	C	D	E	F	G	H	I	J
5	44	16	16	25	16	29	35	35	54	35
10	44	16	16	25	16	29	35	35	54	35
15	54	26	26	35	26	39	45	45	64	45
20	54	26	26	35	26	39	45	45	64	45
30	64	36	36	45	36	49	55	55	74	55

*1 : A plug is assembled on the opposite side of the piping port specified by the model No.
*2 : For switch mounting position dimensions, please refer to P. 44 and P. 45.

• With Buffer (-B)



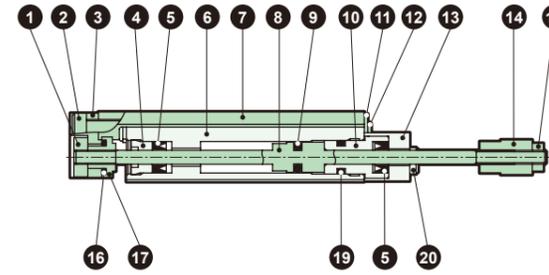
• Positioning Pin (-J)



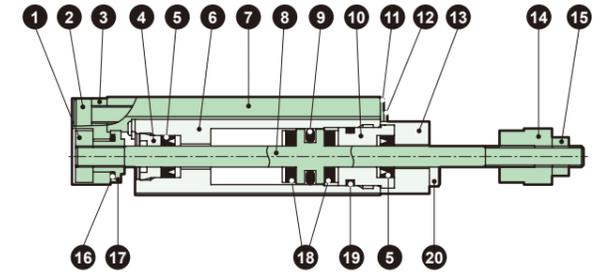
Internal Structure Diagram/Material

Internal Structure Diagram/Material

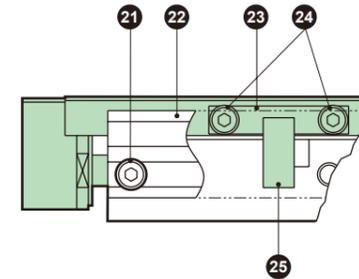
● LCM-P-4.5



● LCM-P-6,8



● LCM-P-4.5 to 8 With magnet and switch rail



• Positioning Pin (-J)



Do not disassemble

Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Floating bush A	Stainless Steel		15	Hexagon Nut	$\phi 4.5$: Stainless steel	
2	Hexagon Socket Head Cap Screw	Stainless Steel				$\phi 6, \phi 8$: Steel	$\phi 6, \phi 8$: Nickel plating
3	End plate	Aluminum Alloy		16	O-ring	Nitrile Rubber	
4	Rod Cover	Polyacetal		17	Floating bush B	Stainless Steel	
5	Rod Packing	Nitrile Rubber		18	Cushion Rubber	Urethane Rubber	
6	Cylinder Body	Stainless Steel		19	O-ring	Nitrile Rubber	
7	Slide table	Stainless Steel		20	Hexagon Socket Head Cap Screw	Stainless Steel	
8	Piston	Stainless Steel		21	Hexagon Socket Head Cap Screw	Stainless Steel	
9	Piston Packing	Nitrile Rubber		22	Switch Rail	Aluminum Alloy	
10	Cover	Aluminum Alloy		23	Plate	Aluminum Alloy	
11	Stopper plate	Stainless Steel		24	Hexagon Socket Head Cap Screw	Stainless Steel	
12	Machine screw	Stainless Steel		25	Magnet	Plastic	
13	Stopper A	Steel	Nickel Plating	26	Positioning pin	Steel	
14	Adjusting Stopper	Steel	Nickel Plating				



Linear Slide Cylinder Double Acting, Stroke Adjustment Type (Push/Pull)

LCM-R Series

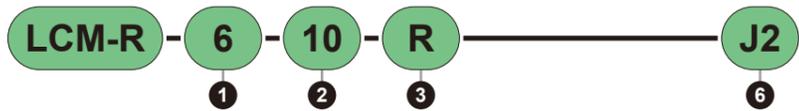
● Bore size: $\phi 4.5$, $\phi 6$, $\phi 8$

Circuit Diagram
Symbol

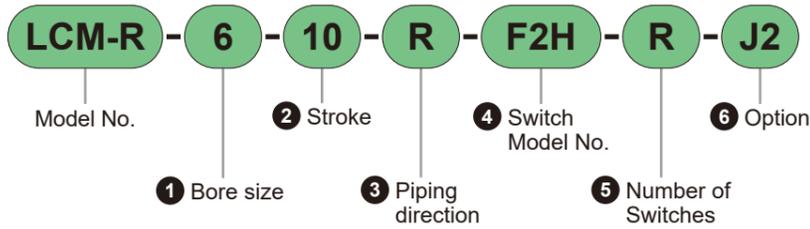


Model No. Notation Method

Without Switch
(Without magnet for switch)



With Switch
(Built-in magnet for switch)



1 Bore Size (mm)

Code	Content
4.5	$\phi 4.5$
6	$\phi 6$
8	$\phi 8$

2 Stroke (mm)

Code	Bore size		
	$\phi 4.5$	$\phi 6$	$\phi 8$
5	●	●	●
10	●	●	●
15		●	●
20		●	●
30		●	●

3 Piping direction

Code	Content
R	Right side when viewed from rod side
L	Left side when viewed from rod side

4 Switch Model No.

For switch details, please refer to P. 753. Switches are included to the product and shipped.

Contact	Indicator Lamp Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead Wire *1		Image	
			AC	DC	AC	DC	Straight	L-shape		
Solid State	1-Color	2-wire	-	10 to 30	-	5 to 20	-	F2S□		
		3-wire (NPN)	-	30 or less	-	50 or less	-	F3S□		
		2-wire	-	10 to 30	-	5 to 20 *2	F2H□	F2V□		
		3-wire (NPN)	-	30 or less	-	50 or less	F3H□	F3V□		
		1-Color (Custom order)	3-wire (PNP)	-	30 or less	-	50 or less	F3PH□	F3PV□	
		2-Color	2-wire	-	24±10%	-	5 to 20	F2YH□	F2YV□	
3-wire (NPN)	-		30 or less	-	50 or less	F3YH□	F3YV□			

*Lead wire length

Code	Content
Blank	1 m (Standard)
3	3 m (Option)

Example) Lead wire length
1 m F2S
3 m F2S□

*1: For "□" in the switch model No., enter the code selected from the "Lead wire length" table.

*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)

*3: Switches other than the model Nos. listed above are also available. (Custom product) For details, See P. 753.

5 Number of Switches

Code	Content
R	With 1 on Rod Side
H	With 1 on Head Side
D	With 2 pcs

6 Option

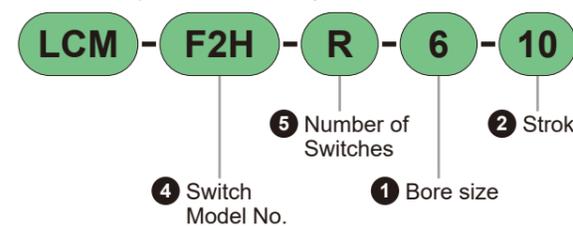
Code	Content	Image
B	With buffer	
M	With magnet	
F1	Magnet + Switch rail (1 switch groove)	
F2	Magnet + Switch rail (2 switch grooves)	
J□	Positioning pin included (□ Number of pins)	

*1: If a switch model No. is specified, selection is not necessary.

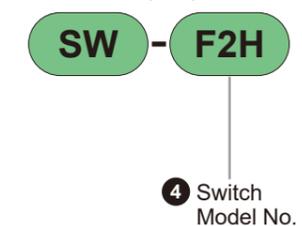
*2: Selectable only for $\phi 4.5$.

Switch Single Unit Model No. Notation Method

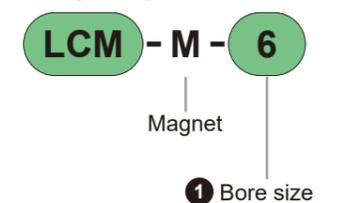
● Switch body + Switch rail + Magnet



● Switch body only



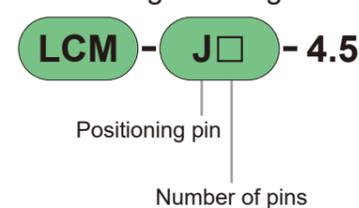
● Magnet only



● Switch rail only



Positioning Pin Single Item Model No. Notation Method



Specifications

Item	LCM-R			
Bore size	mm	ø4.5	ø6 ø8	
Actuation method	Double Acting Type			
Operating Fluid	Compressed Air			
Max. Working Pressure	MPa	0.7		
Min. Operating Pressure	MPa	0.25	0.2 0.15	
Proof Pressure	MPa	1.05		
Ambient Temperature	°C	0 to 60		
Port Size	M3			
Stroke tolerance	mm	+1.0		
		0		
Operating Piston Speed	mm/s	30 to 500		
Cushion		None		
		None		
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)			
Stroke adjustment range		Push	mm	-5 to 0
		Pull	mm	-7 to 0
Repeat positioning accuracy	mm	±0.02		
Allowable Absorbed Energy	J	Refer to the table on P. 48.		

With buffer specification

Item	With buffer (B)		
Buffer Stroke	mm	4 (MAX)	
Buffer part spring load	At SET	N	0.3
	During operation	N	0.7

Stroke

Bore size (mm)	Standard Stroke (mm)	Minimum stroke with switch (mm)
ø4.5	5, 10	5
ø6	5,10,15,20,30	
ø8	5,10,15,20,30	

Note) Strokes other than standard are not available.

Cylinder Weight

Unit: g

Stroke (mm)	5		10		15		20		30		Added Weight	
	Magnet + Switch rail		Magnet + Switch rail		Magnet + Switch rail		Magnet + Switch rail		Magnet + Switch rail		With buffer	Weight per switch
	None	Available										
ø4.5	52	56	52	56	-	-	-	-	-	-	3	Refer to the mass described in the switch specifications on P. 753
ø6	71	76	71	76	80	86	89	95	107	114	4	
ø8	100	105	100	105	123	129	123	129	146	153	5	

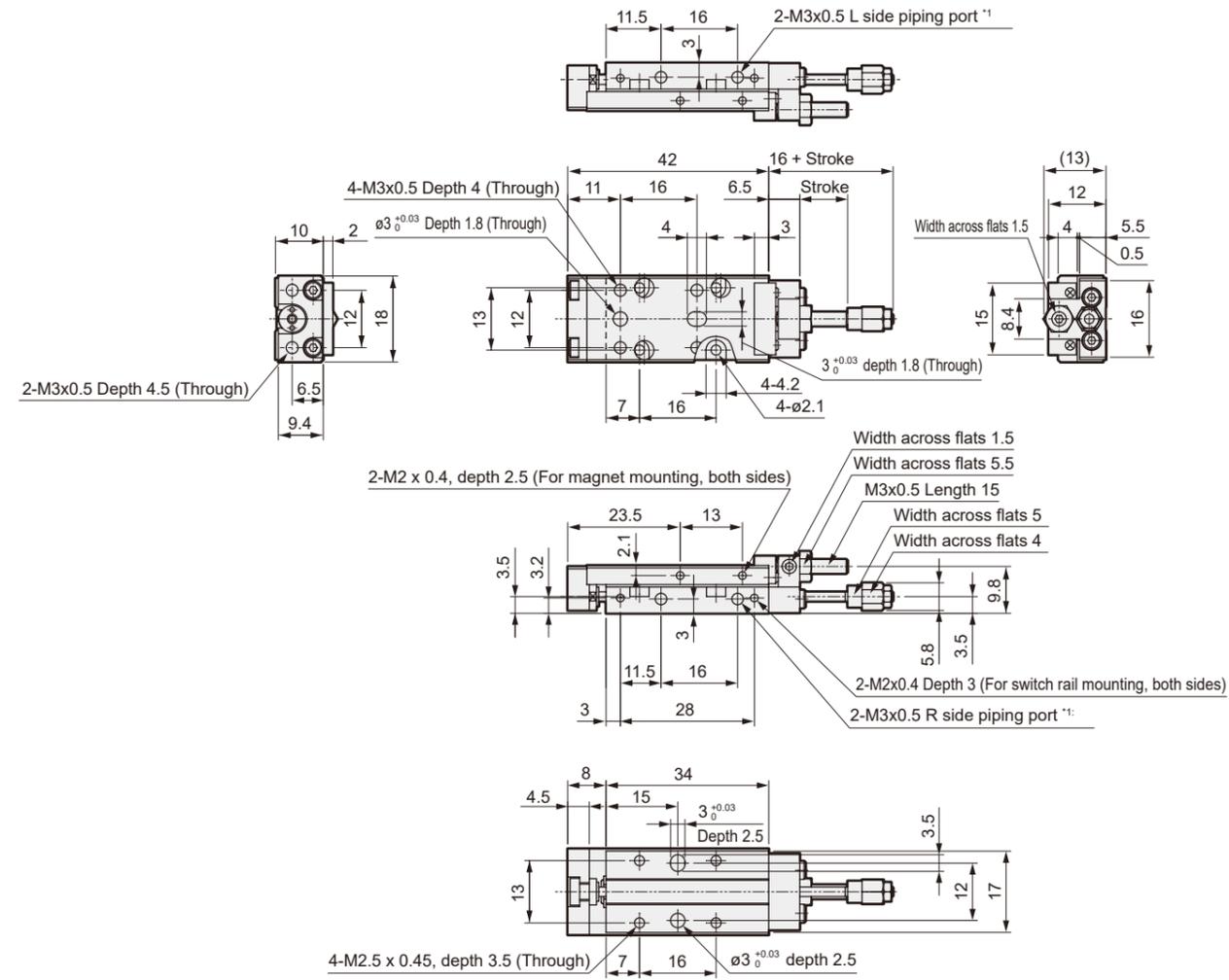
Theoretical Thrust Table

Unit: N

Bore Size (mm)	Operating Pressure MPa					
	0.2	0.3	0.4	0.5	0.6	0.7
ø4.5	-	3.8	5.1	6.4	7.7	8.9
ø6	4.2	6.4	8.5	10.6	12.7	14.8
ø8	8.6	13.0	17.3	21.6	25.9	30.2

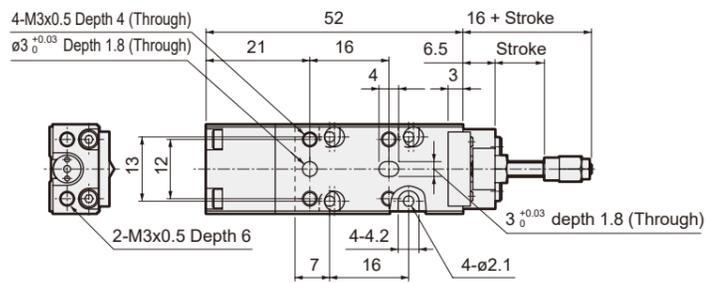
Outline dimension drawing (Bore size: $\phi 4.5$)

● LCM-R-4.5

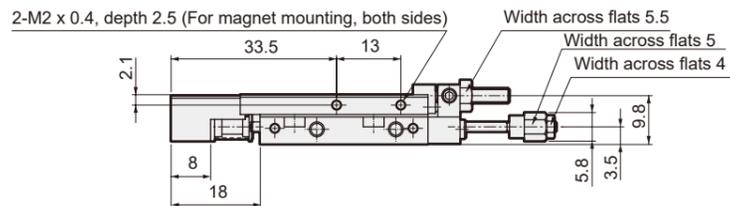
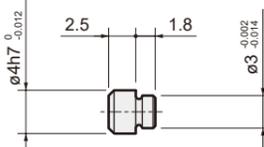


*1: A plug is assembled on the opposite side of the piping port specified by the model No..
*2: For switch mounting position dimensions, please refer to P. 44 and P. 45.

• With Buffer (-B)



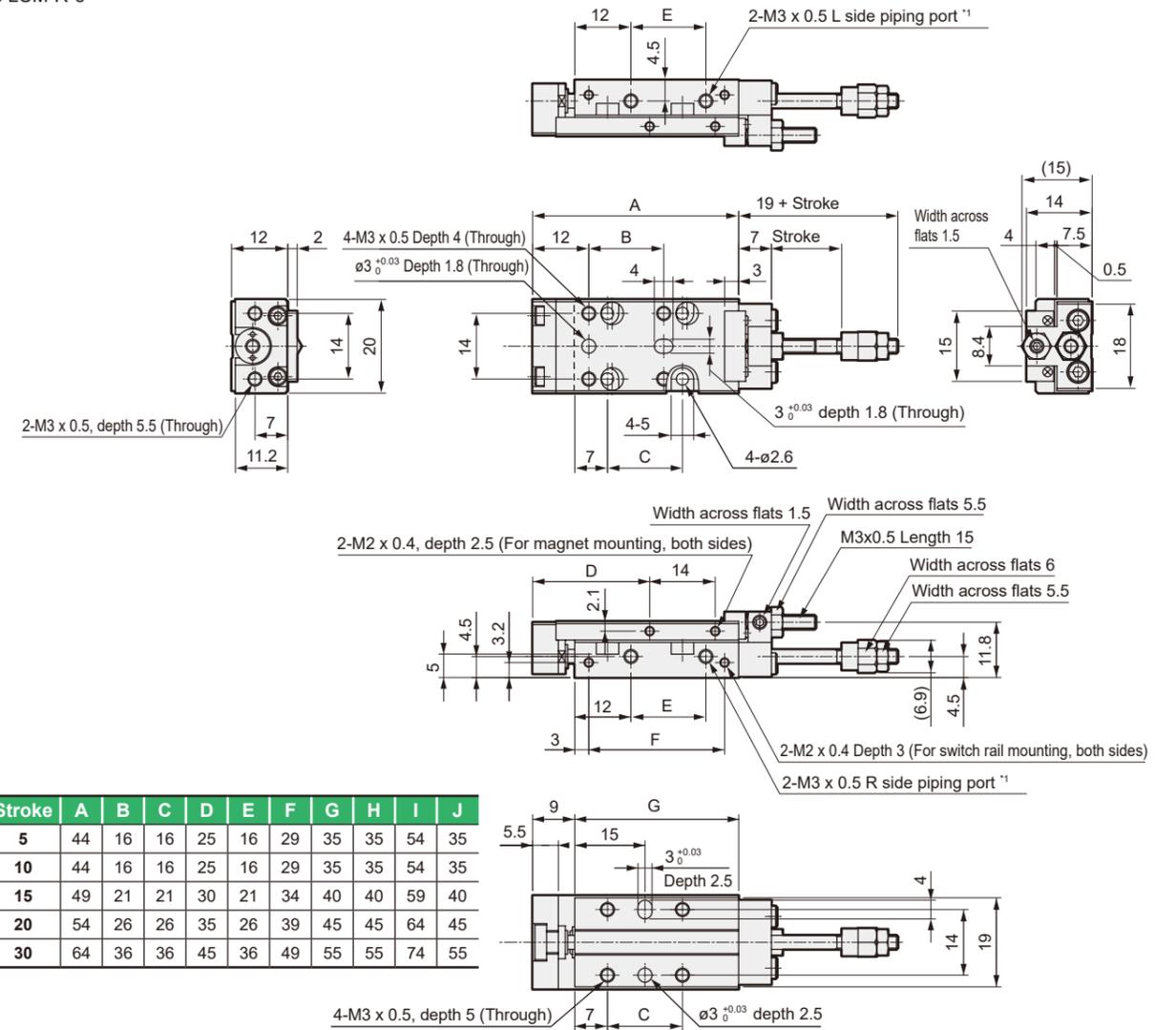
• Positioning Pin (-J)



Outline Dimension Drawing

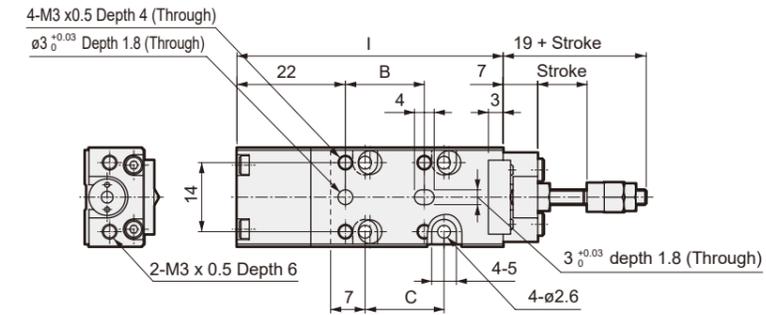
Outline dimension drawing (Bore size: $\phi 6$)

● LCM-R-6

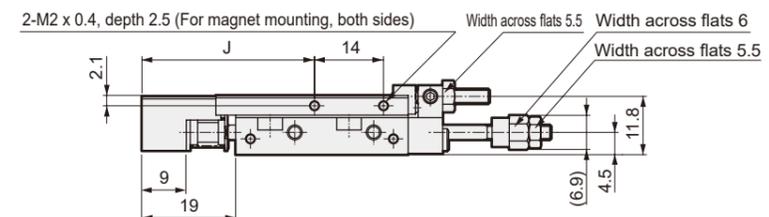
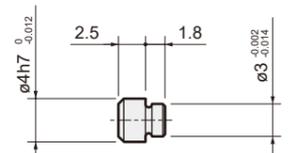


*1: A plug is assembled on the opposite side of the piping port specified by the model No..
*2: For switch mounting position dimensions, please refer to P. 44 and P. 45.

• With Buffer (-B)

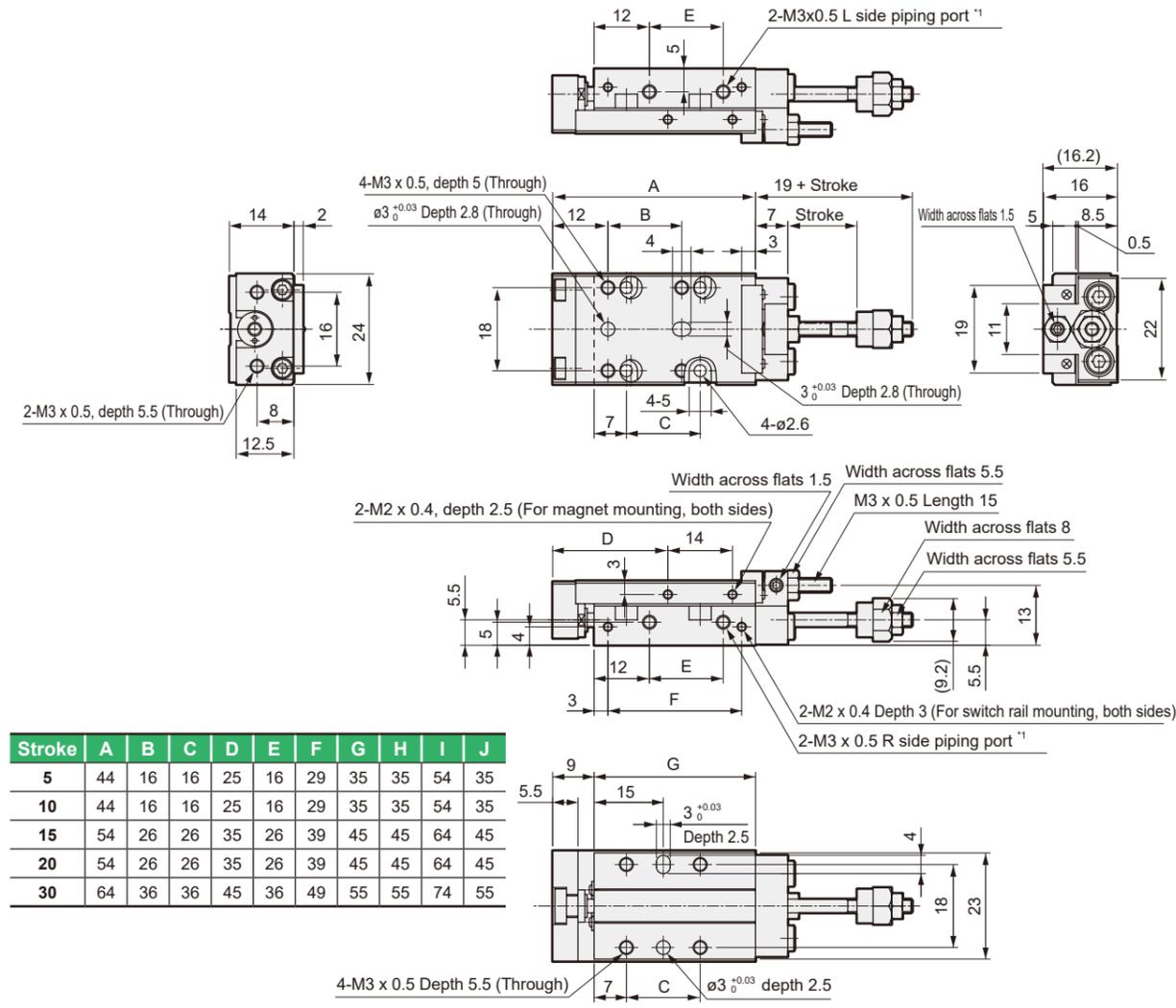


• Positioning Pin (-J)



Outline dimension drawing (Bore size: $\varnothing 8$)

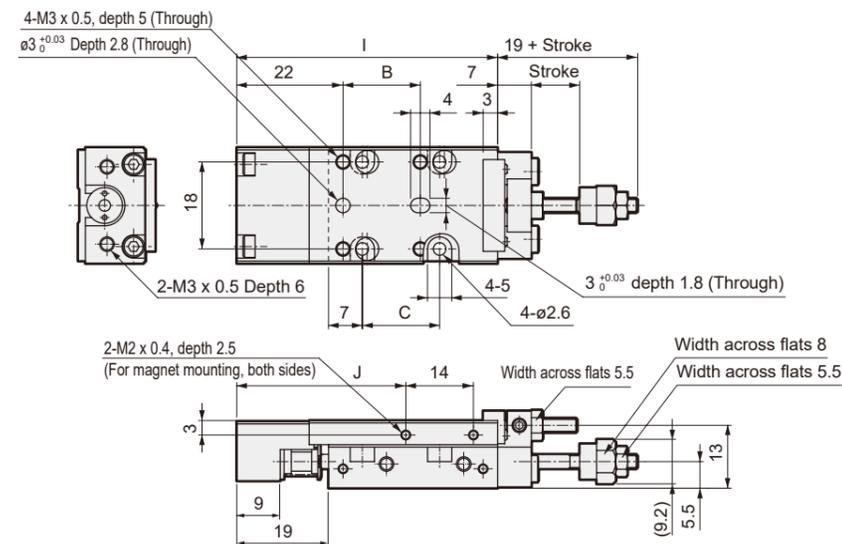
● LCM-R-8



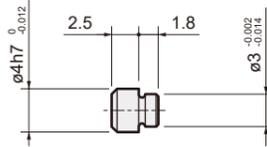
Stroke	A	B	C	D	E	F	G	H	I	J
5	44	16	16	25	16	29	35	35	54	35
10	44	16	16	25	16	29	35	35	54	35
15	54	26	26	35	26	39	45	45	64	45
20	54	26	26	35	26	39	45	45	64	45
30	64	36	36	45	36	49	55	55	74	55

*1: A plug is assembled on the opposite side of the piping port specified by the model No.
*2: For switch mounting position dimensions, please refer to P. 44 and P. 45.

• With Buffer (-B)



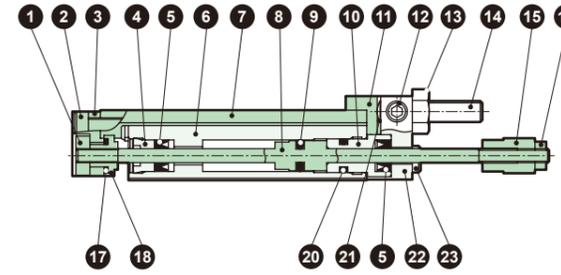
• Positioning Pin (-J)



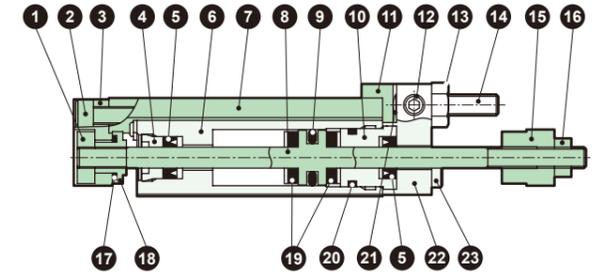
Internal Structure Diagram/Material

Internal Structure Diagram/Material

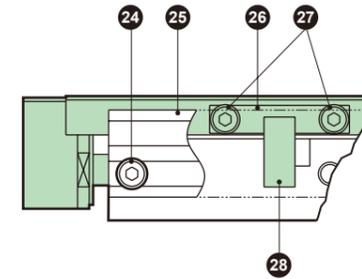
● LCM-R-4.5



● LCM-R-6,8



● LCM-R-4.5 to 8 With magnet and switch rail



• Positioning Pin (-J)



Do not disassemble

Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Floating bush A	Stainless Steel		16	Hexagon Nut	$\varnothing 4.5$: Stainless steel $\varnothing 6, \varnothing 8$: Steel	$\varnothing 6, \varnothing 8$: Nickel plating
2	Hexagon Socket Head Cap Screw	Stainless Steel		17	O-ring	Nitrile Rubber	
3	End plate	Aluminum Alloy		18	Floating bush B	Stainless Steel	
4	Rod Cover	Polyacetal		19	Cushion Rubber	Urethane Rubber	
5	Rod Packing	Nitrile Rubber		20	O-ring	Nitrile Rubber	
6	Cylinder Body	Stainless Steel		21	Machine screw	Stainless Steel	
7	Slide table	Stainless Steel		22	Stopper A	Steel	Nickel Plating
8	Piston	Stainless Steel		23	Hexagon Socket Head Cap Screw	Stainless Steel	
9	Piston Packing	Nitrile Rubber		24	Hexagon Socket Head Cap Screw	Stainless Steel	
10	Cover	Aluminum Alloy		25	Switch Rail	Aluminum Alloy	
11	Stopper B	Steel	Nickel Plating	26	Plate	Aluminum Alloy	
12	Machine screw	Stainless Steel		27	Hexagon Socket Head Cap Screw	Stainless Steel	
13	Hexagon Nut	Stainless Steel		28	Magnet	Plastic	
14	Stopper bolt	Stainless Steel		29	Positioning pin	Steel	
15	Adjusting Stopper	Steel	Nickel Plating				

With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

Cylinder Switch

Ending

With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

Cylinder Switch

Ending



Linear Slide Cylinder Double Acting, Side Mount Type

LCM-A Series

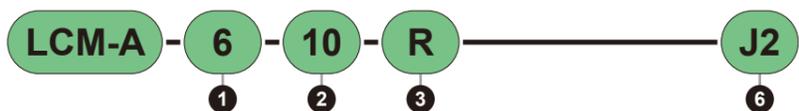
● Bore size: $\phi 4.5$, $\phi 6$, $\phi 8$

Circuit Diagram Symbol

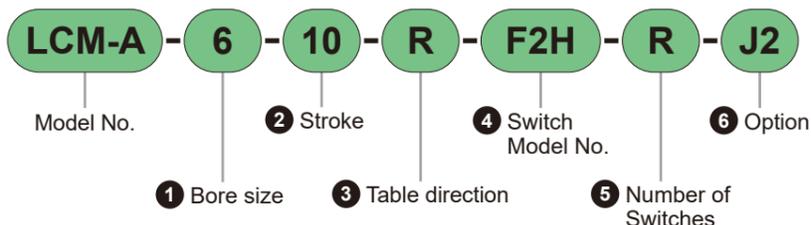


Model No. Notation Method

Without Switch
(Without magnet for switch)



With Switch
(Built-in magnet for switch)



1 Bore Size (mm)

Code	Content
4.5	$\phi 4.5$
6	$\phi 6$
8	$\phi 8$

2 Stroke (mm)

Code	Bore size		
	$\phi 4.5$	$\phi 6$	$\phi 8$
5	●	●	●
10	●	●	●
15		●	●
20		●	●
30		●	●

3 Table direction

Code	Content
R	Right side when viewed from rod side
L	Left side when viewed from rod side

4 Switch Model No.

For switch details, please refer to P. 753. Switches are included to the product and shipped.

Contact	Indicator Lamp Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead Wire *1	
			AC	DC	AC	DC	Straight	L-shape
Solid State	1-Color	2-wire	-	10 to 30	-	5 to 20	-	F2S□
		3-wire (NPN)	-	30 or less	-	50 or less	-	F3S□
		2-wire	-	10 to 30	-	5 to 20 *2	F2H□	F2V□
		3-wire (NPN)	-	30 or less	-	50 or less	F3H□	F3V□
1-Color (Custom order)	3-wire (PNP)	-	30 or less	-	50 or less	F3PH□	F3PV□	
		2-wire	-	24±10%	-	5 to 20	F2YH□	F2YV□
2-Color	3-wire (NPN)	-	30 or less	-	50 or less	F3YH□	F3YV□	

*Lead wire length

Code	Content
Blank	1 m (Standard)
3	3 m (Option)

Example) Lead wire length
1 m F2S
3 m F2S□

5 Number of Switches

Code	Content
R	With 1 on Rod Side
H	With 1 on Head Side
D	With 2 pcs

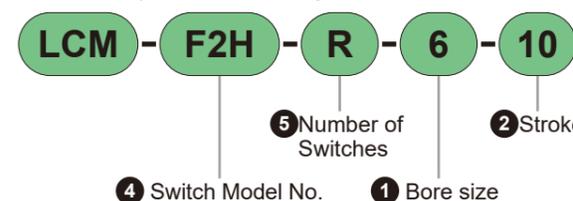
6 Option

Code	Content
B	With buffer
M	With magnet
F1	Magnet + Switch rail (1 switch groove)
F2	Magnet + Switch rail (2 switch grooves)
J□	Positioning pin included (□... Number of pins)

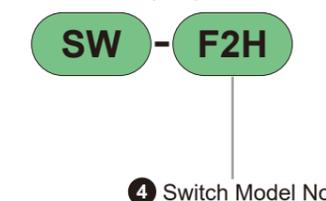
*1: If a switch model No. is specified, selection is not necessary.
*2: Selectable only for $\phi 4.5$.

Switch Single Unit Model No. Notation Method

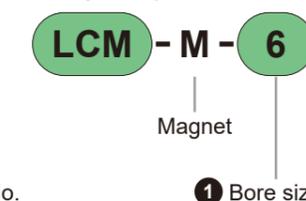
● Switch body + Switch rail + Magnet



● Switch body only



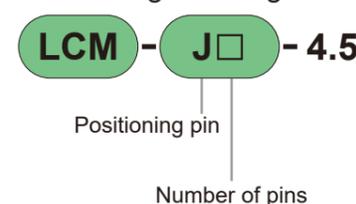
● Magnet only



● Switch rail only



Positioning Pin Single Item Model No. Notation Method



*1: For "□" in the switch model No., enter the code selected from the "Lead wire length" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: Switches other than the model Nos. listed above are also available. (Custom order) For details, See P. 753.

With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

Cylinder Switch

Ending

Cylinder Switch

Ending

Specifications

Item	LCM-A			
	mm	ø4.5	ø6	ø8
Bore size	mm	ø4.5	ø6	ø8
Actuation method		Double Acting Type		
Operating Fluid		Compressed Air		
Max. Working Pressure	MPa	0.7		
Min. Operating Pressure	MPa	0.2		0.15
Proof Pressure	MPa	1.05		
Ambient Temperature	°C	0 to 60		
Port Size		M3		
Stroke tolerance	mm	+1.0		
Operating Piston Speed	mm/s	0		
Cushion		None	With Rubber Cushion	
Lubrication		Not required (When lubricating, use turbine oil Class 1 ISO VG32)		
Allowable Absorbed Energy	J	Refer to the table on P. 48.		

With buffer specification

Item	mm	With buffer (B)
Buffer Stroke	mm	4 (MAX)
Buffer part spring load	At SET / During operation	N / N
		0.3 / 0.7

Stroke

Bore size (mm)	Standard Stroke (mm)	Minimum stroke with switch (mm)
ø4.5	5, 10	5
ø6	5, 10, 15, 20, 30	
ø8	5, 10, 15, 20, 30	

Note) Strokes other than standard are not available.

Cylinder Weight

Unit: g

Stroke (mm)	5		10		15		20		30		Added Weight	
	Bore Size (mm)		Magnet + Switch rail	With buffer	Weight per switch							
ø4.5	None	Available	None	Available	None	Available	None	Available	None	Available	3	Refer to the mass described in the switch specifications on P. 753
ø6	59	63	59	63	-	-	-	-	-	-	4	
ø8	78	83	78	83	88	94	98	104	118	125	5	

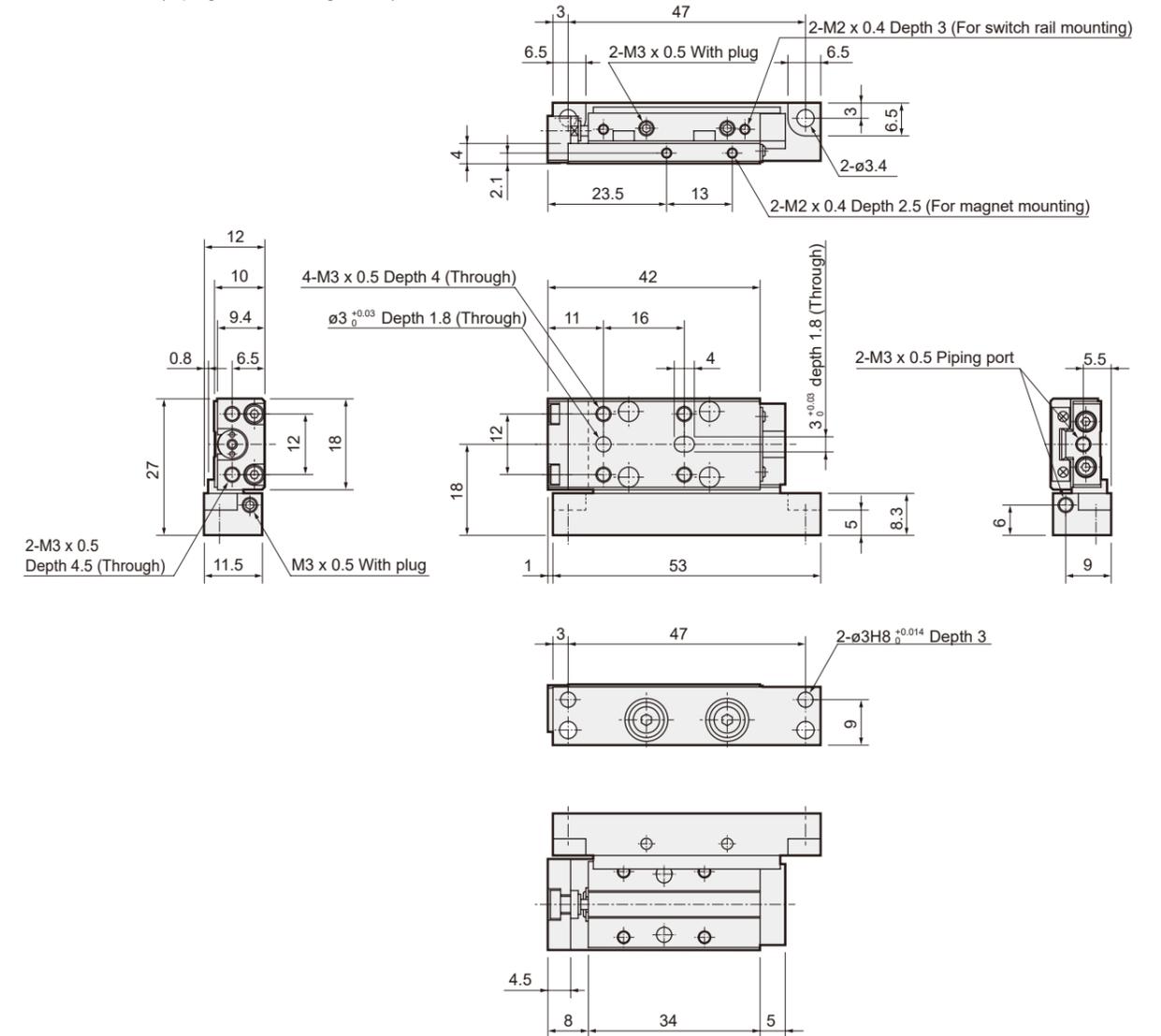
Theoretical Thrust Table

Unit: N

Bore Size (mm)	Operating Direction	Operating Pressure MPa					
		0.2	0.3	0.4	0.5	0.6	0.7
ø4.5	Push	3.2	4.8	6.4	8.0	9.5	11.1
	Pull	2.6	3.8	5.1	6.4	7.7	8.9
ø6	Push	5.7	8.5	11.3	14.1	17.0	19.8
	Pull	4.2	6.4	8.5	10.6	12.7	14.8
ø8	Push	10.1	15.1	20.1	25.1	30.2	35.2
	Pull	8.6	13.0	17.3	21.6	25.9	30.2

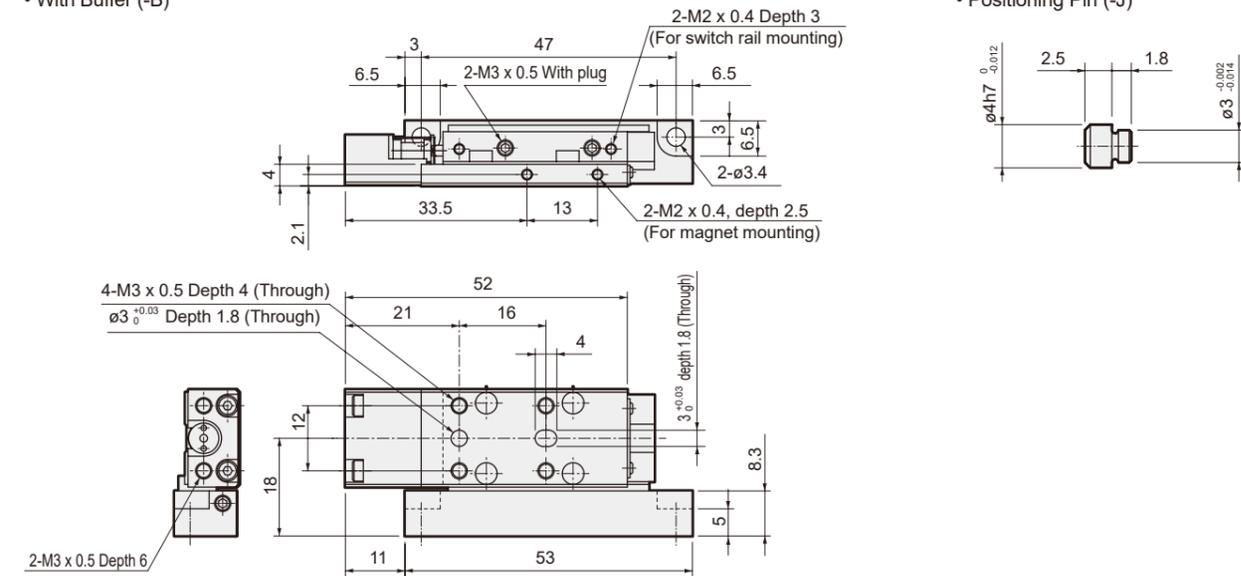
Outline dimension drawing (Bore size: ø4.5)

● LCM-A-4.5-R (Piping direction : Right side)



• With Buffer (-B)

• Positioning Pin (-J)



Note) For switch mounting position dimensions, see P. 44 and P. 45.

With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

Cylinder Switch

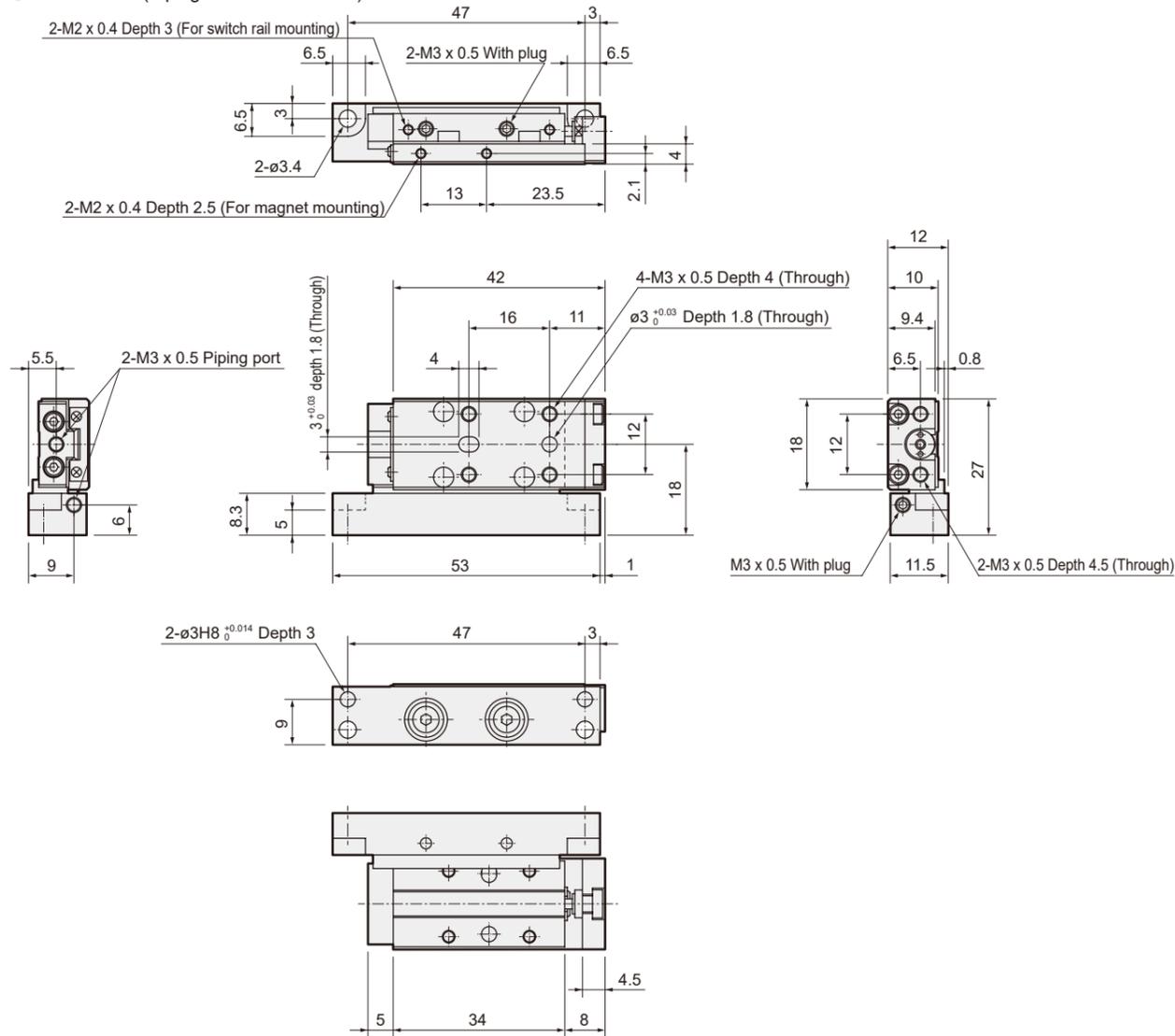
Ending

Cylinder Switch

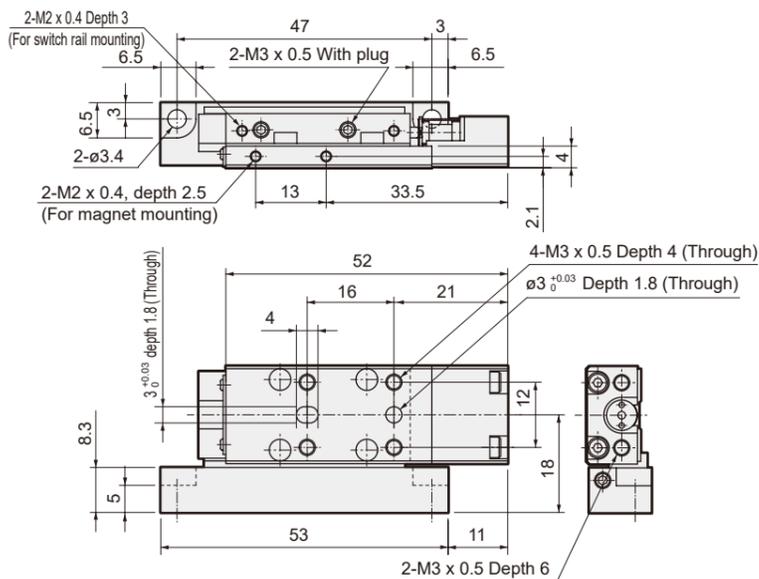
Ending

Outline dimension drawing (Bore size: $\phi 4.5$)

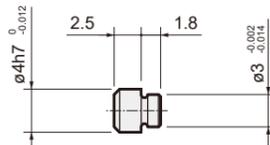
● LCM-A-4.5-L (Piping direction: Left side)



• With Buffer (-B)



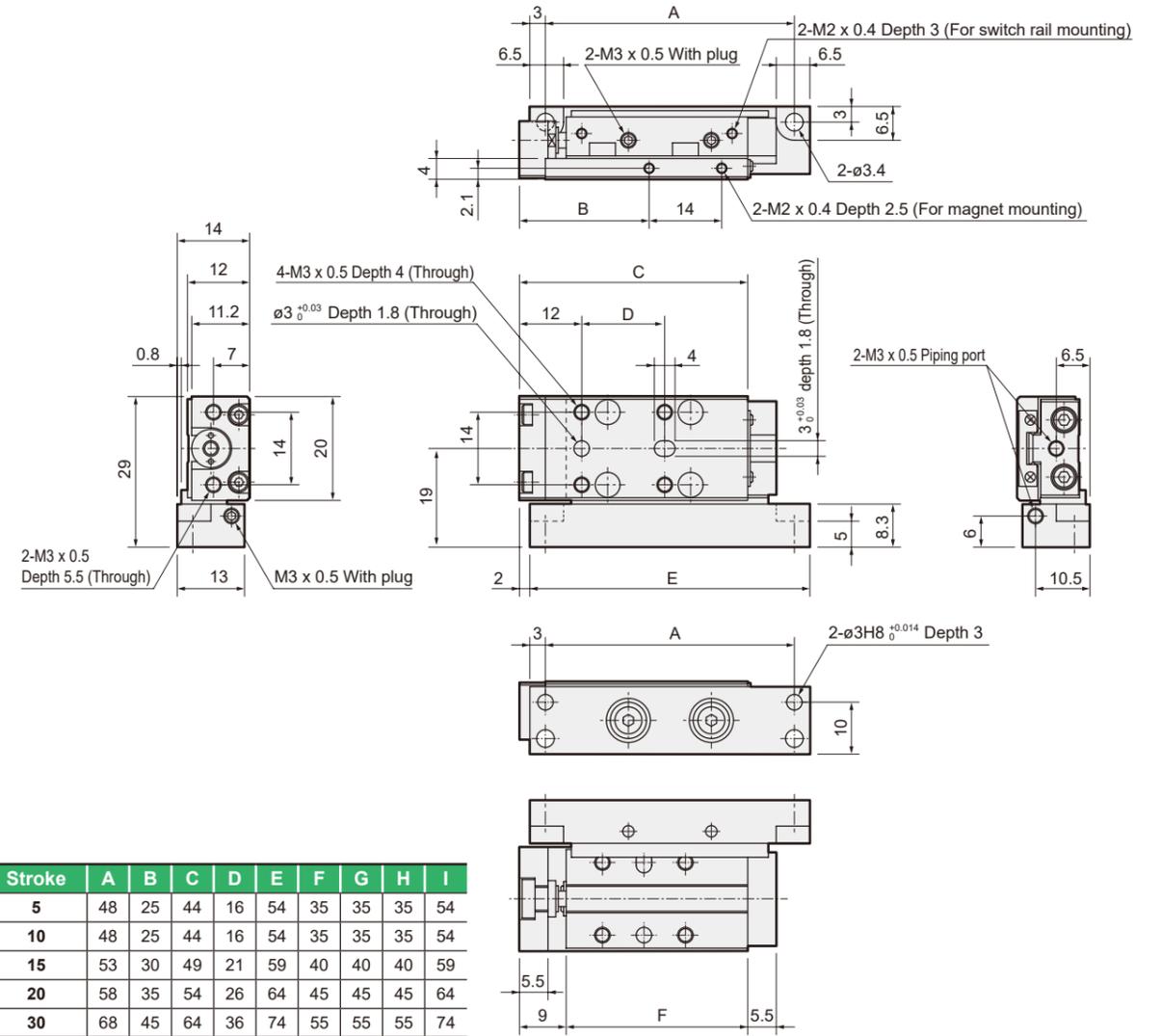
• Positioning Pin (-J)



Note: For switch mounting position dimensions, see P. 44 and P. 45.

Outline dimension drawing (Bore size: $\phi 6$)

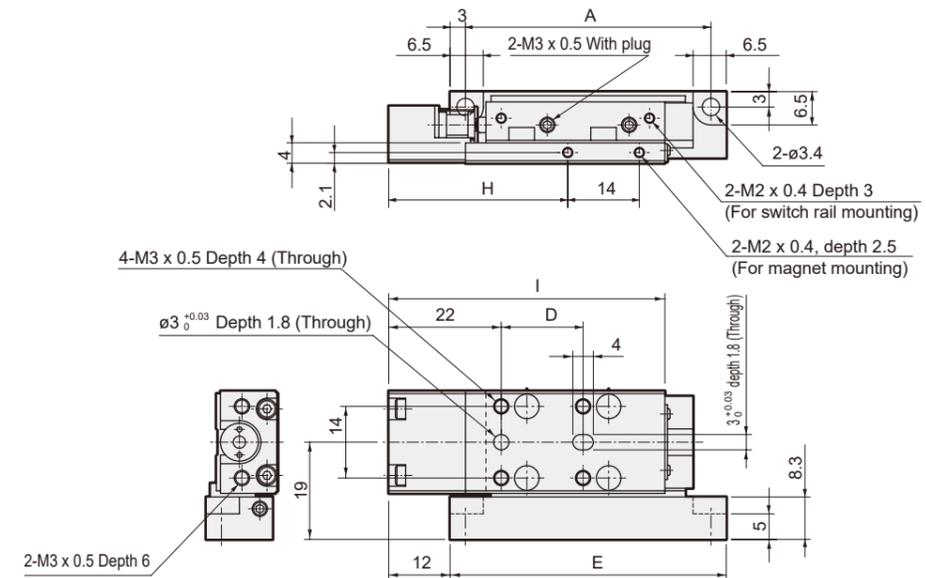
● LCM-A-6-R (Piping direction : Right side)



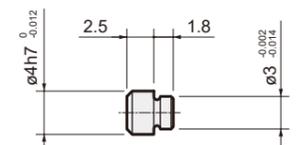
Stroke	A	B	C	D	E	F	G	H	I
5	48	25	44	16	54	35	35	35	54
10	48	25	44	16	54	35	35	35	54
15	53	30	49	21	59	40	40	40	59
20	58	35	54	26	64	45	45	45	64
30	68	45	64	36	74	55	55	55	74

Note) For switch mounting position dimensions, see P. 44 and P. 45.

• With Buffer (-B)

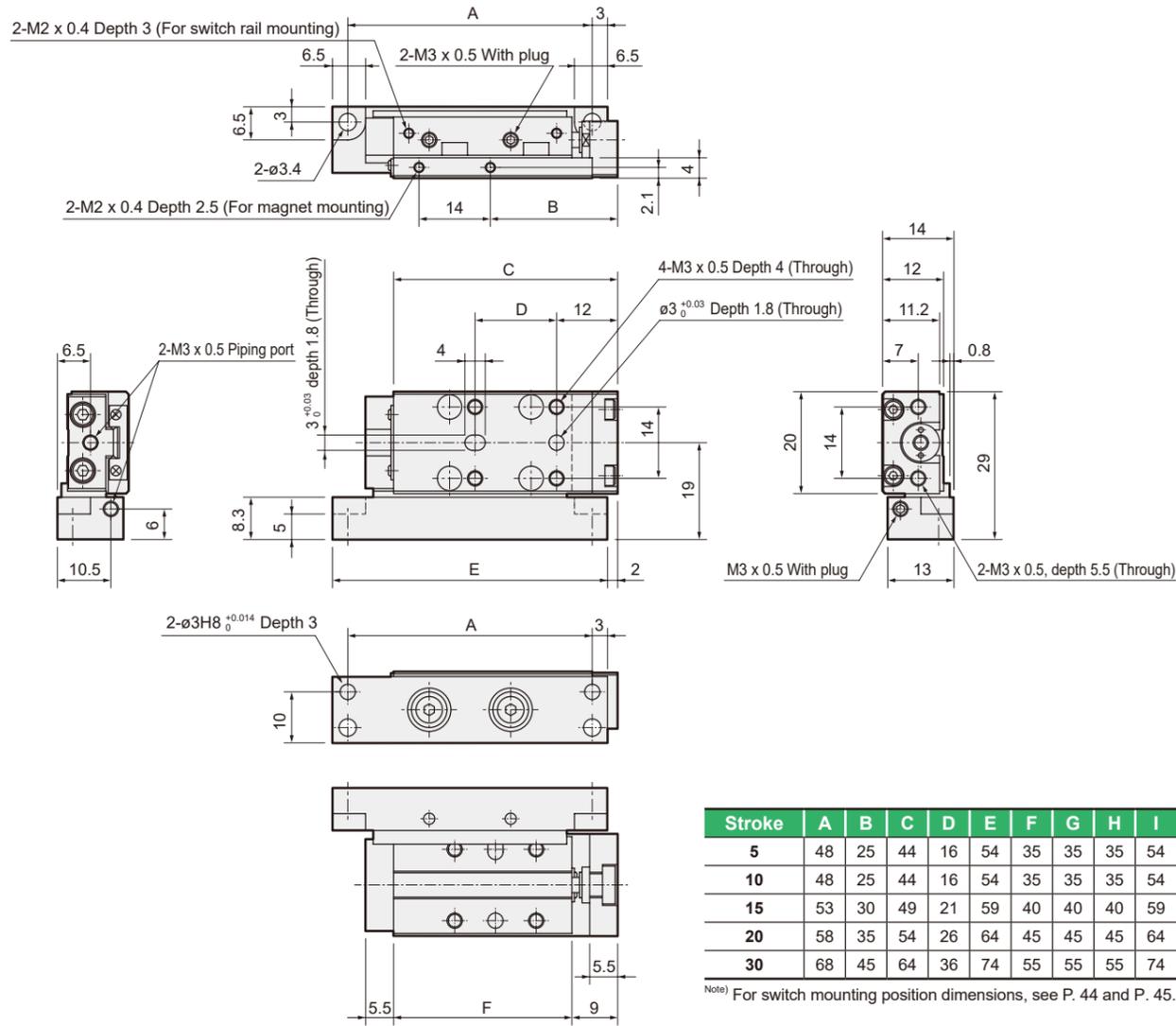


• Positioning Pin (-J)

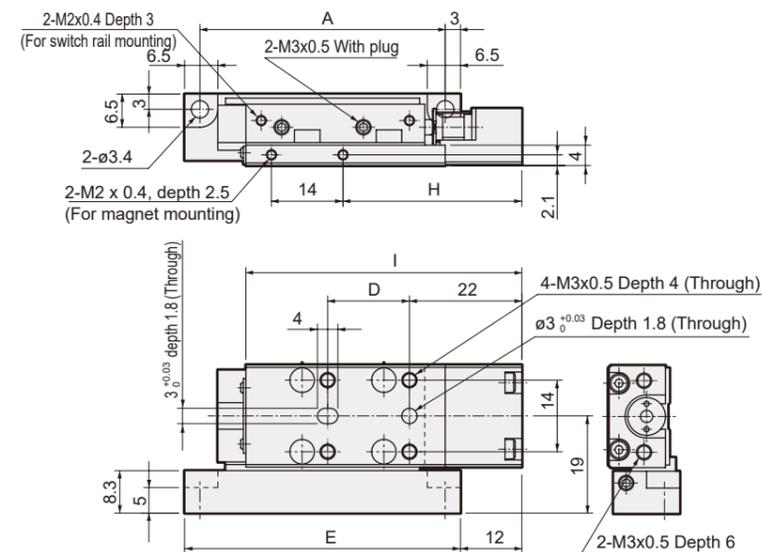


Outline dimension drawing (Bore size: $\phi 6$)

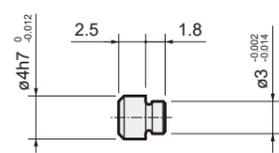
● LCM-A-6-L (Piping direction: Left side)



• With Buffer (-B)

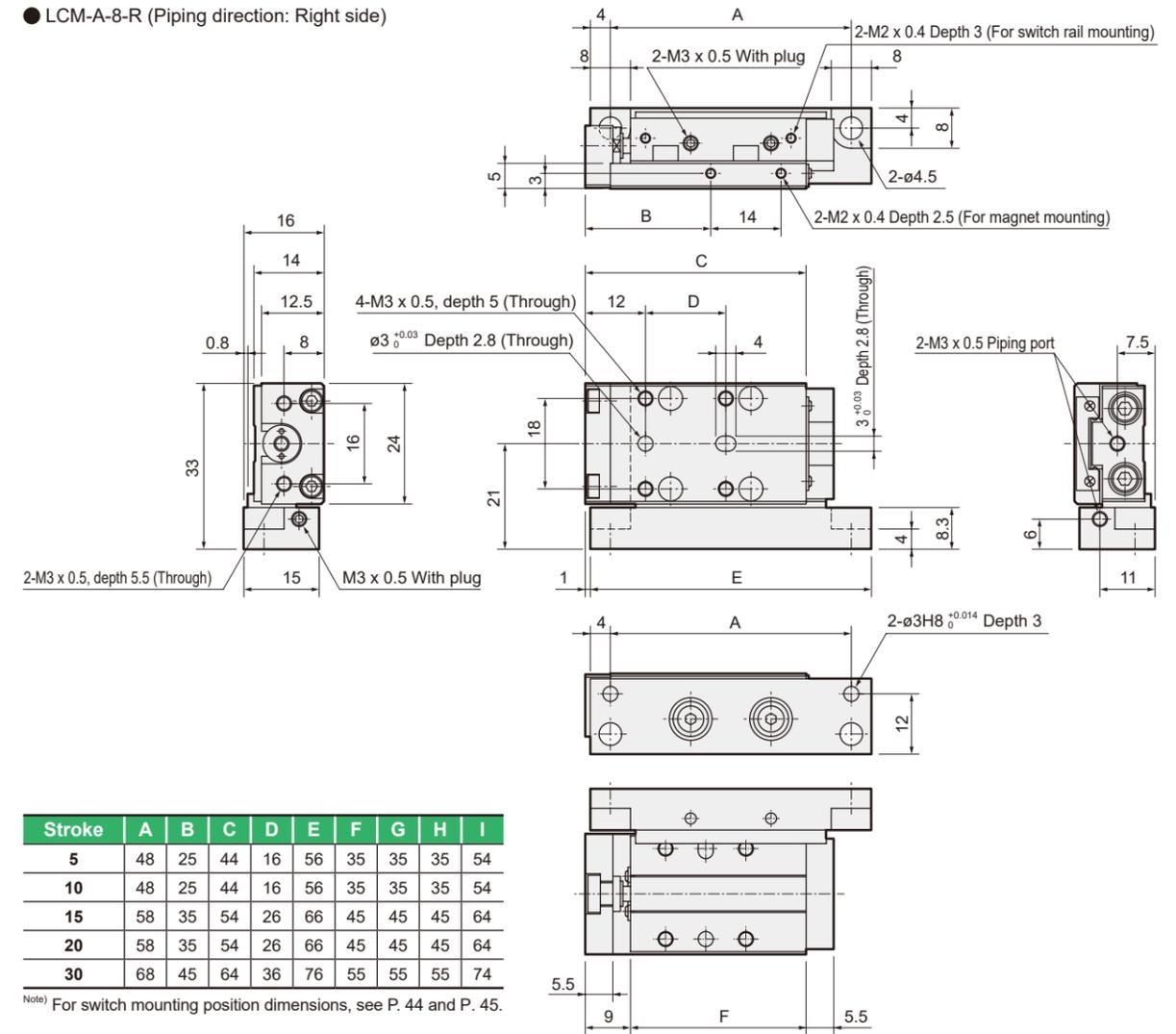


• Positioning Pin (-J)

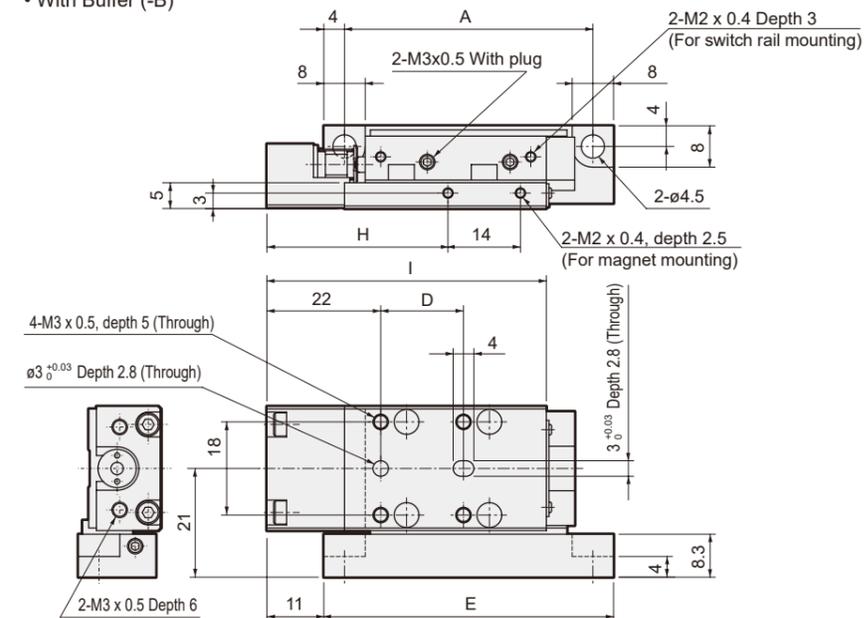


Outline dimension drawing (Bore size: $\phi 8$)

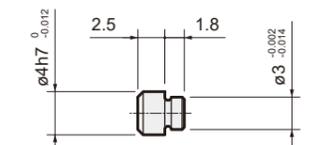
● LCM-A-8-R (Piping direction: Right side)



• With Buffer (-B)



• Positioning Pin (-J)



With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

Cylinder Switch

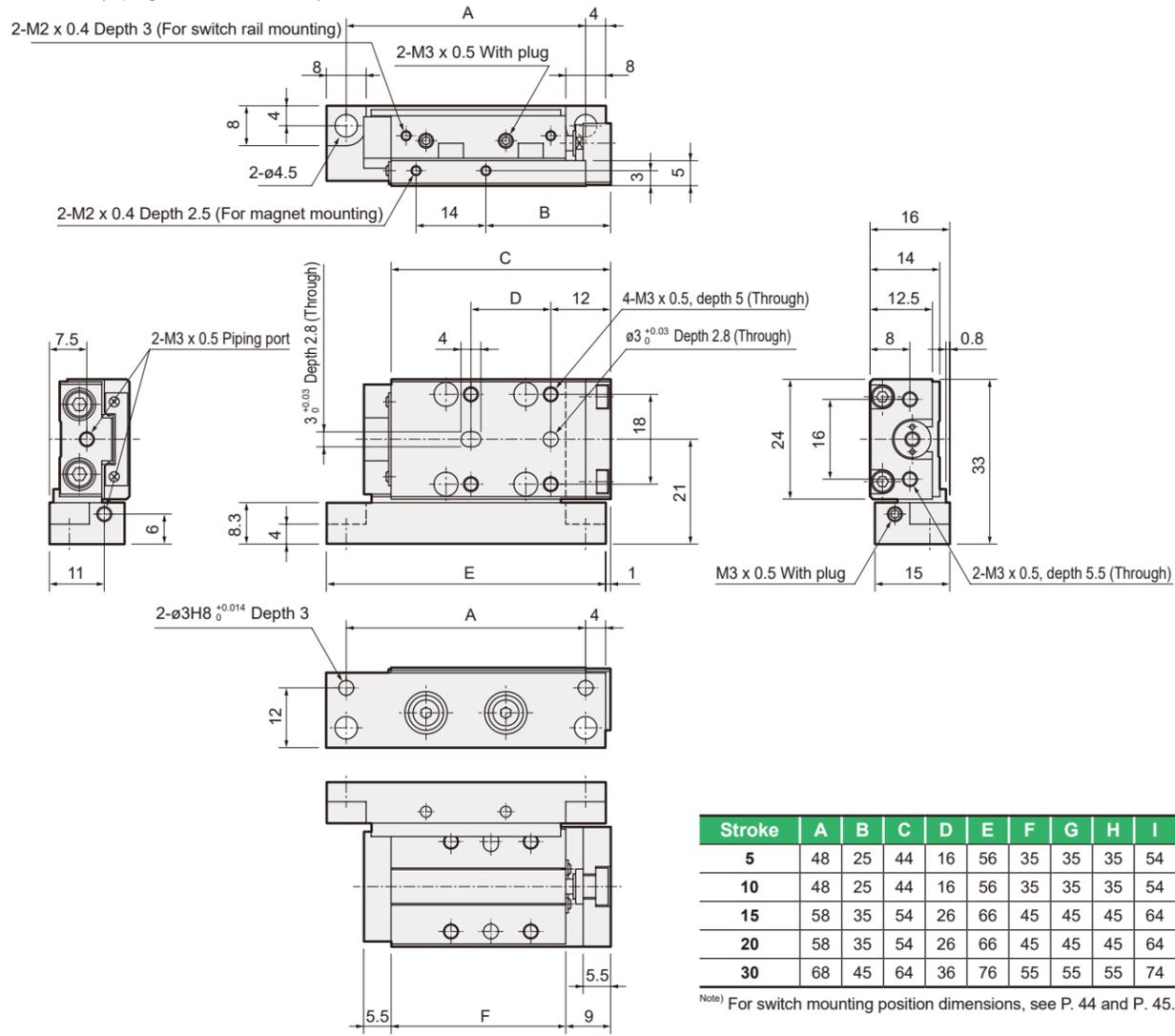
Ending

Cylinder Switch

Ending

Outline dimension drawing (Bore size: $\phi 8$)

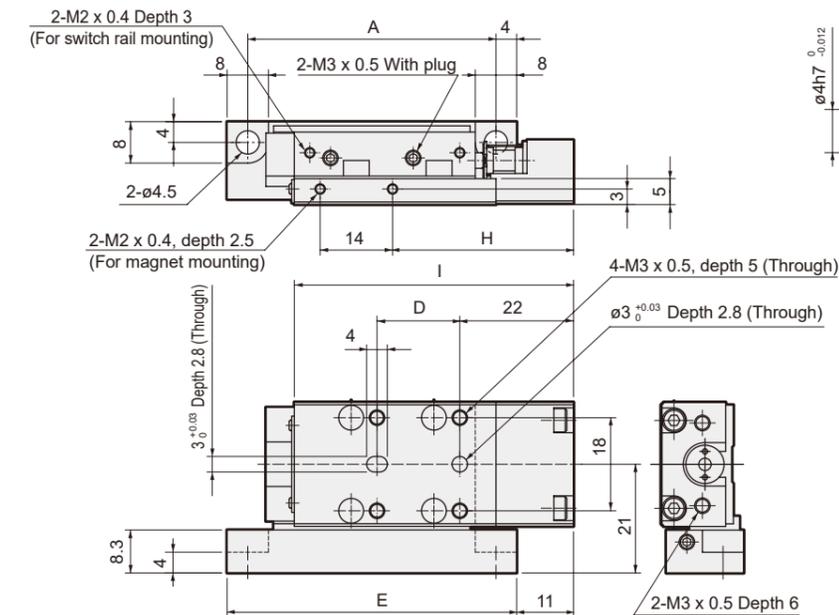
● LCM-A-8-L (Piping direction: Left side)



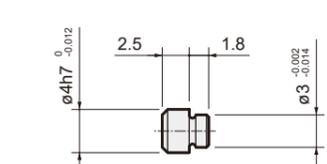
Stroke	A	B	C	D	E	F	G	H	I
5	48	25	44	16	56	35	35	35	54
10	48	25	44	16	56	35	35	35	54
15	58	35	54	26	66	45	45	45	64
20	58	35	54	26	66	45	45	45	64
30	68	45	64	36	76	55	55	55	74

Note) For switch mounting position dimensions, see P. 44 and P. 45.

• With Buffer (-B)



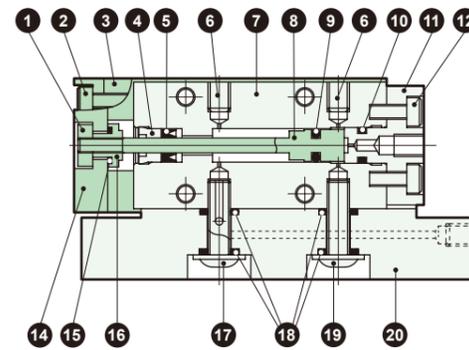
• Positioning Pin (-J)



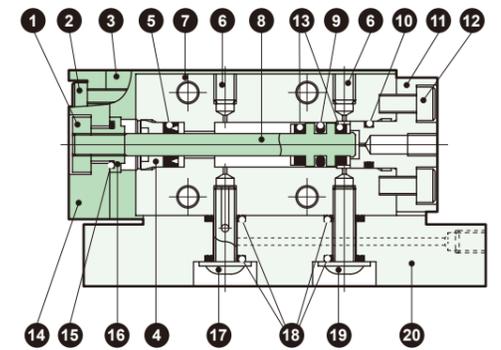
Internal Structure Diagram/Material

Internal Structure Diagram/Material

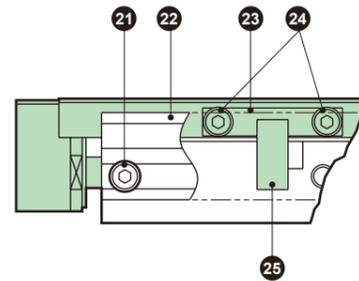
● LCM-A-4.5



● LCM-A-6,8



● LCM-A-4.5 to 8-F With magnet and switch rail



• Positioning Pin (-J)

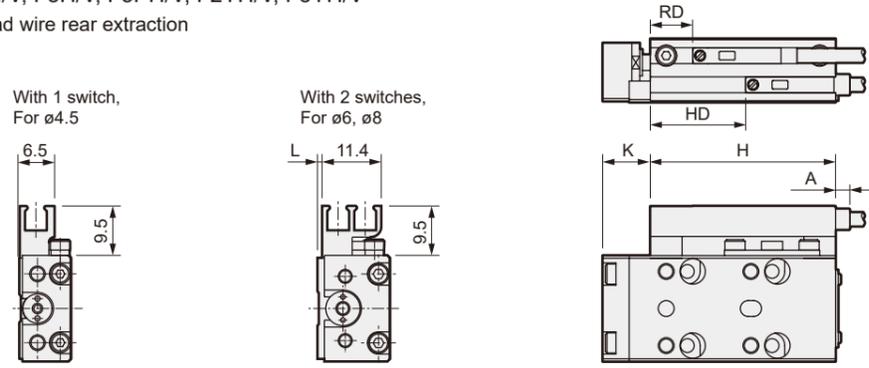


Do not disassemble

Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Floating bush A	Stainless Steel		14	End plate	Aluminum Alloy	
2	Hexagon Socket Head Cap Screw	Stainless Steel		15	O-ring	Nitrile rubber	
3	Slide table	Stainless Steel		16	Floating bush B	Stainless Steel	
4	Rod Cover	Polyacetal		17	Hexagon Socket Head Cap Screw	Stainless Steel	
5	Rod Packing	Nitrile Rubber		18	O-ring	Nitrile rubber	
6	Machine screw	Stainless Steel		19	Hexagon Socket Head Cap Screw	Stainless Steel	
7	Cylinder Body	Stainless Steel		20	Base	Aluminum Alloy	
8	Piston	Stainless Steel		21	Hexagon Socket Head Cap Screw	Stainless Steel	
9	Piston Packing	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 Screw	Stainless Steel	
12	Bolt	Stainless Steel		25	Magnet	Plastic	
13	Cushion Rubber	Urethane Rubber		26	Positioning pin	Steel	

LCM Series Outline Dimension Drawing with Switch

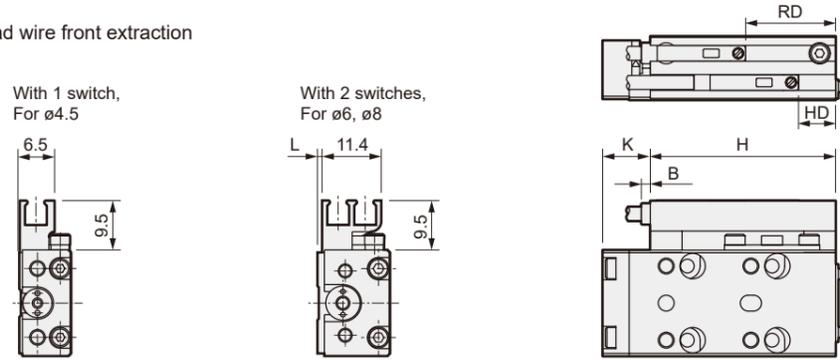
- F2H/V, F3H/V, F3PH/V, F2YH/V, F3YH/V
- Lead wire rear extraction



LCM,LCM-P,LCM-R,LCM-A												
Code Bore Size (mm)	Stroke	H	K	L	F2,F3,F3P			F2Y,F3Y				
					A	RD	HD	A	RD	HD		
ø4.5	5	34	8	0.1	2.7	7.2	12	17	12	17		
	10	34					7	17				
ø6	5	35	9	0.1			13	18			13	18
	10	35					8	18			8	18
	15	40					8	23			8	23
	20	45					8	28			8	28
ø8	5	35	9	0.9			8	38			8	38
	10	35					13	18			13	18
	15	45					8	18			8	18
	20	45					13	28			13	28
30	55	8	28	8			28					
30	55	8	38	8			38					

*1: The above diagram shows the case of piping direction R. In the case of piping direction H, the switch rail mounting position will be on the underside of the cylinder.
*2: For switch mountability, refer to the model No. display method for each variation.

- Lead wire front extraction



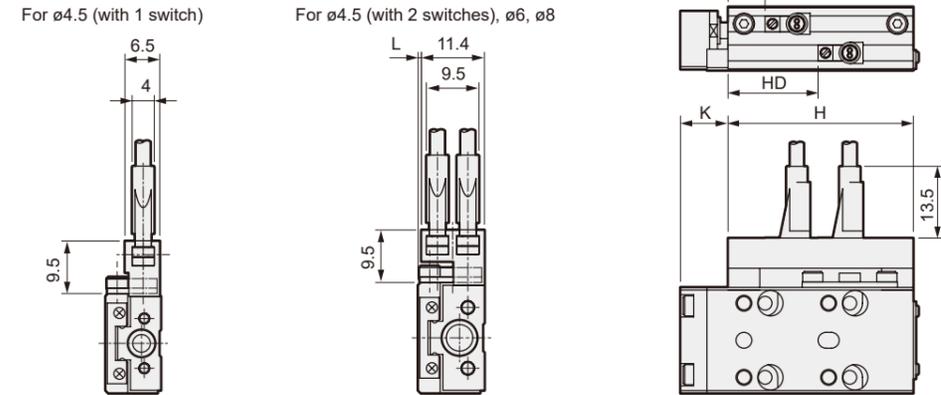
LCM,LCM-P,LCM-R,LCM-A											
Code Bore Size (mm)	Stroke	H	K	L	F2,F3,F3P			F2Y,F3Y			
					B	RD	HD	B	RD	HD	
ø4.5	5	34	8	0.1	-	12	7	-	12	7	
	10	34			1.7	17		6.2	17		
ø6	5	35	9	0.1	-	12		6.2	-		12
	10	35			1.7	17			17		
	15	40				22			22		
	20	45				27			27		
30	55	37	37								
ø8	5	35	9	0.9	-	12		6.2	-		12
	10	35			1.7	17			6.2		17
	15	45			-	22			-		22
	20	45			1.7	27			6.2		27
30	55	1.7	37	6.2	37						

*1: The above diagram shows the case of piping direction R. In the case of piping direction H, the switch rail mounting position will be on the underside of the cylinder.
*2: For switch mountability, refer to the model No. display method for each variation.

External Dimensions Diagram with Switch

LCM Series Outline Dimension Drawing with Switch

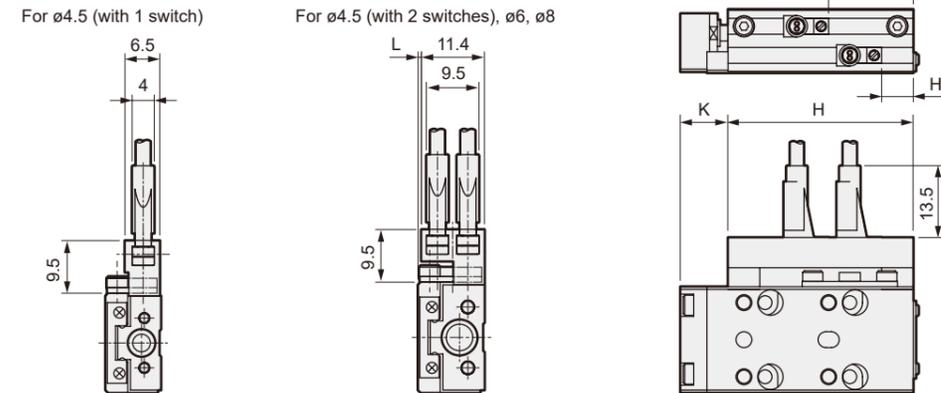
- F2S, F3S
- Lead wire rear extraction



LCM,LCM-P,LCM-R,LCM-A						
Code Bore Size (mm)	Stroke	H	K	L	F2S,F3S	
					RD	HD
ø4.5	5	34	8	0.1	11	16
	10	34			6	16
ø6	5	35	9	0.1	12	17
	10	35			7	17
	15	40			7	22
	20	45			7	27
ø8	5	35	9	0.9	7	37
	10	35			12	17
	15	45			7	17
	20	45			12	27
30	55	7	27			
30	55	7	37			

*1: The above diagram shows the case of piping direction R. In the case of piping direction H, the switch rail mounting position will be on the underside of the cylinder.
*2: For switch mountability, refer to the model No. display method for each variation.

- Lead wire front extraction



LCM,LCM-P,LCM-R,LCM-A						
Code Bore Size (mm)	Stroke	H	K	L	F2S,F3S	
					RD	HD
ø4.5	5	34	8	0.1	11	6
	10	34			16	
ø6	5	35	9	0.1	11	
	10	35			16	
	15	40			21	
	20	45			26	
ø8	5	35	9	0.9	11	
	10	35			16	
	15	45			21	
	20	45			26	
30	55	36				

*1: The above diagram shows the case of piping direction R. In the case of piping direction H, the switch rail mounting position will be on the underside of the cylinder.
*2: For switch mountability, refer to the model No. display method for each variation.

With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

Cylinder Switch

Ending

Cylinder Switch

Ending

Model selection guide

STEP-1

Confirm that the load moment in each direction is below the allowable value throughout the entire stroke.

• Moment direction, Guide center position X

Direction	Diagram	Calculation formula
M1 Moment		$M1=L1 \times W$
M2 Moment		$M2=L2 \times W$
M3 Moment		$M3=L3 \times W$

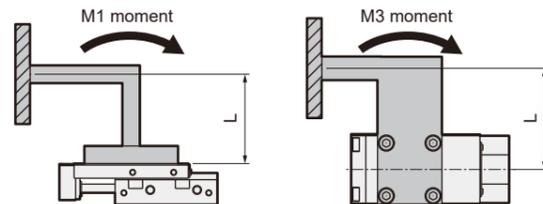
• Allowable moment

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

• Guide center position dimension

Model No.	Stroke	X		
		Standard	With buffer	Clean Specs.
LCM-□-4.5	5	30	40	35
	10	31.5	41.5	36.5
LCM-□-6	5	36.5	46.5	41.5
	10	41.5	51.5	46.5
	15	51.5	61.5	56.5
LCM-□-8	5	31.5	41.5	36.5
	10	41.5	51.5	46.5
	15	51.5	61.5	56.5

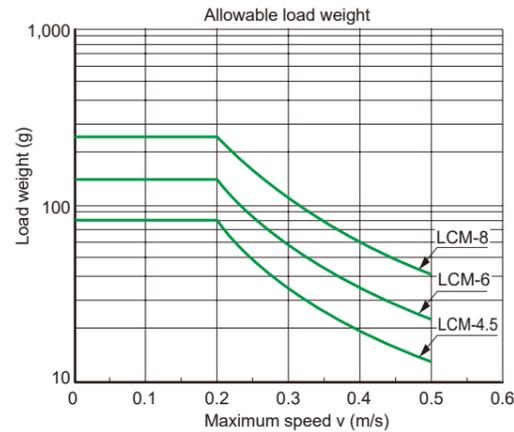
* If the workpiece is abutted at a point offset from the guide portion during the stroke, a large moment will be generated by the thrust, so be careful.



STEP-2

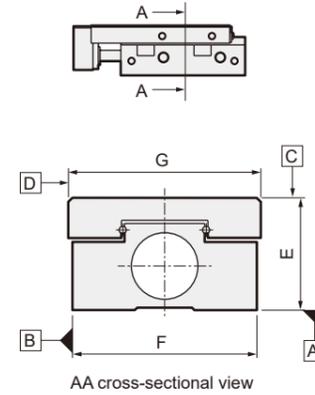
Confirm that the kinetic energy calculated from the cylinder load weight and piston speed is below the allowable absorbed energy.

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



Technical Data

Slide Table Accuracy

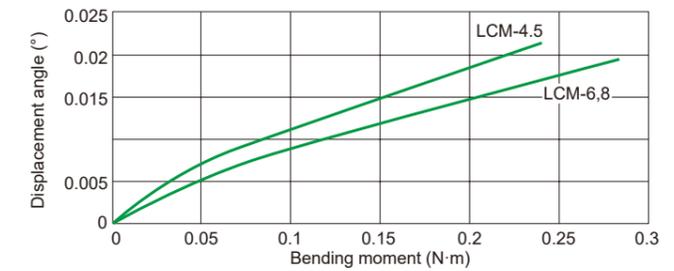
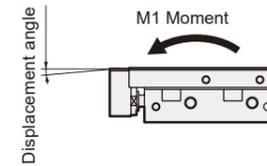


Item	LCM-□-4.5 to 8	
Parallelism	C surface with respect to A surface	0.03
	D surface with respect to B surface	0.03
Running parallelism	C surface with respect to A surface	0.005 ^{Note}
	D surface with respect to B surface	0.005 ^{Note}
Dimensional tolerance of E	±0.05	
Dimensional tolerance of F	±0.05	
Dimensional tolerance of G	±0.05	

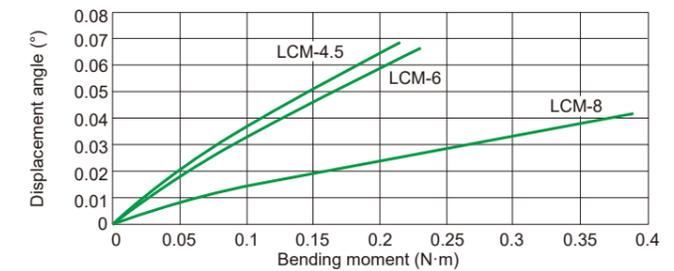
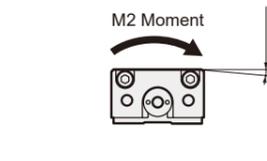
^{Note} For LCM-6,8 with 30 strokes, it will be 0.006.

Displacement angle of slide table due to bending moment (reference value)

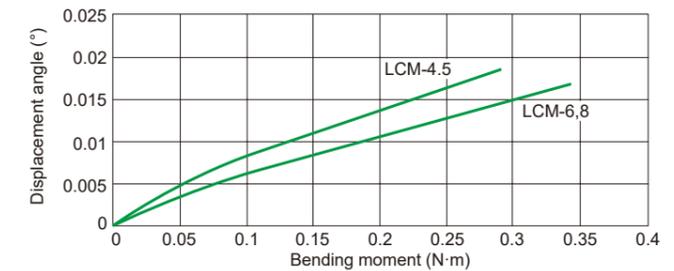
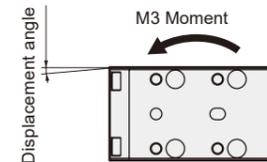
M1 Moment



M2 Moment



M3 Moment



With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

With Linear Guide

LCM

LCR

LCG

LCW

LCX

MSDG

Cylinder Switch

Ending

Cylinder Switch

Ending



To Use This Product Safely

Be sure to read this before use.

For general cylinder information, see Intro 41, and for cylinder switches, see P. 808.

Individual Precautions: Linear Slide Cylinder LCM Series

During Design / Selection

1. Common

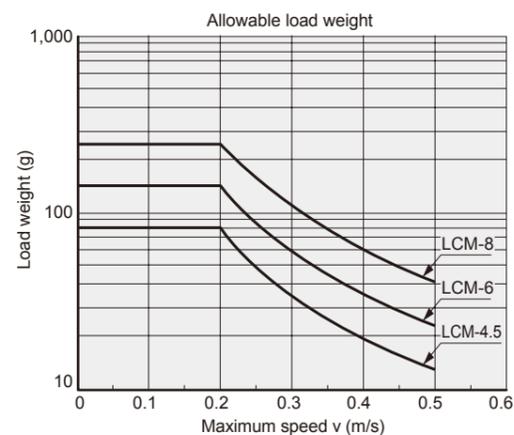
Caution

- When selecting a cylinder, select according to the "LCM Selection Guide" on P. 46.
- If the cylinder is used in a place exposed to water droplets or oil droplets, a place where there is a risk of corrosion, or a place with a lot of dust, it may cause damage or malfunction, so protect the product with a cover, etc.
- The main body and slide table are made of stainless steel, but rust may occur depending on the environment. Apply an appropriate amount of anti-rust oil periodically.
- Be aware that the switch may malfunction in environments with surrounding magnetic fields. Also, since magnetic materials around the switch can cause malfunction, when attaching a magnetic workpiece to the slide table, ensure that it does not protrude beyond the table edge on the switch side.

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

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

Bore size	ø4.5	ø6	ø8
Allowable Absorbed Energy J	1.59x10 ⁻³	2.83x10 ⁻³	5.02x10 ⁻³



During Use

1. Common

Caution

- Apply CGL grease (manufactured by Nippon Thompson Co., Ltd.) to the track rail raceway surface every 6 months or 3 million operating cycles, whichever comes first.
- This cylinder is a non-disassembly type. Do not forcibly disassemble.
- When changing the piping port position, use adhesive for the M3 plug (hexagon socket head set screw). (Recommended adhesive: Loctite 222/221, ThreeBond 1344, or other low-strength adhesives) Also, the tightening amount of the plug should be at an intermediate position where the bolt does not protrude from the port surface and does not hit the bottom of the port hole.

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

Recommended fittings

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

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

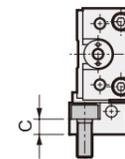
- Do not make dents, scratches, etc. that would impair the flatness of the main body mounting surface and slide table surface. Also, the flatness of the mating part to be included should be 0.02 mm or less. Poor flatness will adversely affect the accuracy of the guide part, increase rolling resistance,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

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

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

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

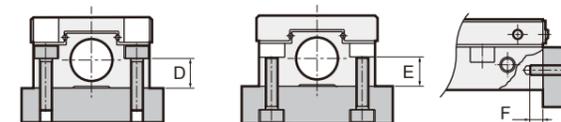
Main body mounting (Side mounting)



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

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

Main body mounting



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

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

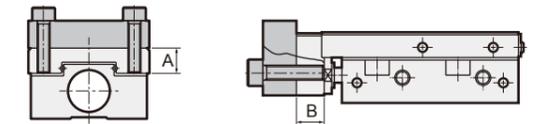
Model No.	Bolt used	Max. tightening torque N·m	Max. screw-in depth F mm
LCM-□-4.5	M2x0.4	0.32	2.5
LCM-□-6	M2.5x0.45	0.65	2.5
LCM-□-8	M3x0.5	1.14	3

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

LCM Series

Individual Precautions

Jig mounting



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

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

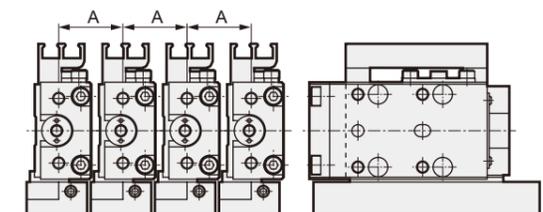
- This cylinder series allows for changes to with-switch models and switch mounting surfaces. The tightening torque for the bolts fixing the switch rail should be the following value. Note that the port on the switch mounting surface cannot be used, so install the plug before assembling the switch rail.

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

2. Side mount type

Caution

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



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

3. With buffer

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

