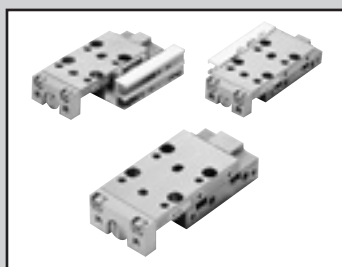


LCM  
LCR  
LCG  
LCW  
LCX  
STM  
STG  
STS/STL  
STR2  
UCA2  
ULK\*  
JSK/M2  
JSG  
JSC3/JSC4  
USSD  
UFCD  
USC  
UB  
JSB3  
LMB  
LML  
HCM  
HCA  
LBC  
CAC4  
UCAC2  
CAC-N  
UCAC-N  
RCS2  
RCC2  
PCC  
SHC  
MCP  
GLC  
MFC  
BBS  
RRC  
GRC  
RV3\*  
NHS  
HRL  
LN  
Hand  
Chuk  
MechHnd/Chuk  
ShkAbs  
FJ  
FK  
SpdContr  
Ending



Linear slide cylinder Double acting/single rod

# LCM Series

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



## Specifications

Descriptions		LCM		
Bore size	mm	$\varnothing 4.5$	$\varnothing 6$	$\varnothing 8$
Actuation		Double acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7		
Min. working pressure	MPa	0.2		0.15
Proof pressure	MPa	1.05		
Ambient temperature	$^{\circ}\text{C}$	0 to 60		
Port size		M3		
Stroke tolerance	mm	+1.0 0		
Working piston speed	mm/s	30 to 500		
Cushion		No	With rubber cushion	
Lubrication		Not required (use turbine oil class 1 ISO VG32 if lubrication is necessary)		
Allowable absorbed energy	J	Refer to the table on page 50.		

## With buffer specifications

Descriptions		LCM-**-**-B
Buffer stroke	mm	4 (MAX)
Buffer part spring load	When set N	0.3
	Operating N	0.7

## Stroke

Bore size (mm)	Standard stroke (mm)	With switch, min. Stroke (mm)
$\varnothing 4.5$	5/10	5
$\varnothing 6$	5/10/15/20/30	
$\varnothing 8$	5/10/15/20/30	

## Switch specifications

\*1: Products with stroke other than standard stroke are not available.

Descriptions	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (Made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC $\pm 10\%$	30 VDC or less		
Load current	5 to 20mA	50 mA or less	5 to 20 mA (*3)		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 $\mu\text{A}$ or less	1 mA or less		10 $\mu\text{A}$ or less		
Weight	g		1 m: 10 3 m: 29				

\*1: Refer to Ending Page 1 for detailed switch specifications and dimensions.

\*2: Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.

\*3: The max. load current is 20 mA at 25 $^{\circ}\text{C}$ . The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25 $^{\circ}\text{C}$ . (5 to 10 mA at 60 $^{\circ}\text{C}$ )

\*4: The F-switch uses a bend-resistant lead wire.

## Cylinder weight

Unit: g

Stroke(mm)	5		10		15		20		30		Additional weight	
	Magnet + No switch rail	Magnet + With switch rail	Magnet + No switch rail	Magnet + With switch rail	Magnet + No switch rail	Magnet + With switch rail	Magnet + No switch rail	Magnet + With switch rail	Magnet + No switch rail	Magnet + With switch rail	With buffer	With 1 switch Additional weight per
$\varnothing 4.5$	42	46	42	46	-	-	-	-	-	-	3	Refer to the weight in the switch specifications.
$\varnothing 6$	58	63	58	63	66	72	74	80	90	97	4	
$\varnothing 8$	83	88	83	88	104	110	104	110	125	132	5	

## 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
$\varnothing 4.5$	Push	3.2	4.8	6.4	8.0	9.5	11.1
	Pull	2.6	3.8	5.1	6.4	7.7	8.9
$\varnothing 6$	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
$\varnothing 8$	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

## How to order

- Without switch (without magnet for switch)

**LCM** - **6** - **10** - **R** - **J2**

- With switch (built-in magnet for switch)

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

**A** Bore size

**B** Stroke

**C** Piping direction

**D** Switch model No.

**E** Switch quantity

**F** Option

### ⚠ Precautions for model No. selection

- \*1: Can be omitted if the switch model No. is specified.
- \*2: Available only for  $\phi 4.5$ .

[Example of model No.]

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

Model No.: Linear slide cylinder, double acting

- A** Bore size :  $\phi 6$  mm
- B** Stroke : 10 mm
- C** Piping direction : Right when viewed from rod side
- D** Switch model No. : Proximity switch F2H, lead wire 1 m
- E** Switch quantity : 1 on rod side
- F** Option : With positioning pin (2)

Code	Description					
<b>A Bore size (mm)</b>						
4.5	$\phi 4.5$					
6	$\phi 6$					
8	$\phi 8$					
<b>B Stroke (mm)</b>						
		Bore size				
		$\phi 4.5$	$\phi 6$	$\phi 8$		
5	5	●	●	●		
10	10	●	●	●		
15	15	-	●	●		
20	20	-	●	●		
30	30	-	●	●		
<b>C Piping direction</b>						
R	Right from rod side					
L	Left from rod side					
<b>D Switch model No.</b>						
Straight lead wire	L-shaped lead wire	Contact	Voltage		Indicator	Lead wire
			AC	DC		
-	F2S*	Proximity		●	1-color LED	2-wire
F2H*	F2V*			●		
-	F3S*			●	3-wire	
F3H*	F3V*			●		
F3PH*	F3PV*			●	1-color LED (PNP output) (made to order)	3-wire
F2YH*	F2YV*			●	2-color LED	2-wire
F3YH*	F3YV*		●	LED	3-wire	
<b>* Lead wire length</b>						
Blank	1 m (standard)					
3	3 m (option)					
<b>E Switch quantity</b>						
R	1 on rod side					
H	1 on head side					
D	2					
<b>F Option</b>						
B	With buffer					
M *1	With magnet					
F1 *1, 2	With magnet + switch rail (one switch groove)					
F2 *1	With magnet + switch rail (two switch grooves)					
J*	With positioning pin (*... number of pins)					

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

## How to order switch

- Switch body + switch rail + magnet

**LCM** - **F2H** - **R** - **6** - **10**

**D** Switch model No.      **B** Stroke

**E** Switch quantity      **A** Bore size

- Switch body only

**SW** - **F2H**

**D** Switch model No.

- Magnet only

**LCM** - **M** - **6**

Magnet

**A** Bore size

- Switch rail only

$\phi 4.5$

**LCM** - **F1** - **4.5**

**F2**

Switch rail

$\phi 6, \phi 8$

**LCM** - **F2** - **6** - **10**

Switch rail

**A** Bore size

**B** Stroke

## How to order discrete positioning pin

**LCM** - **J\*** - **4.5**

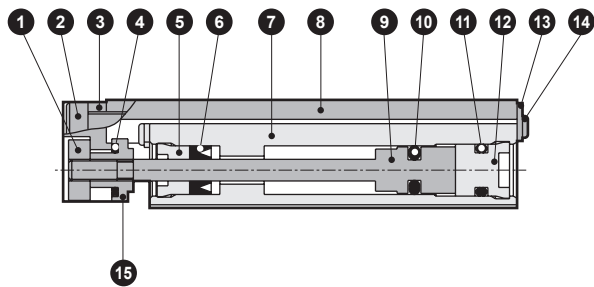
Positioning pin

Number of pins

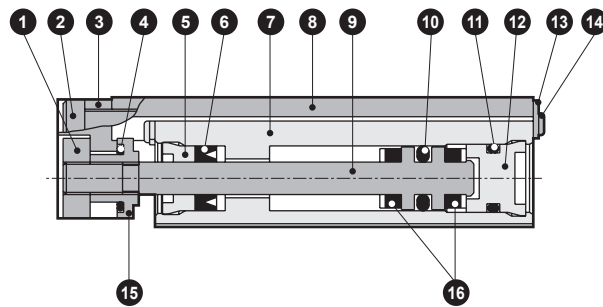
LCM  
LCR  
LCG  
LCW  
LCX  
STM  
STG  
STS/STL  
STR2  
UCA2  
ULK\*  
JSK/M2  
JSG  
JSC3/JSC4  
USSD  
UFCD  
USC  
UB  
JSB3  
LMB  
LML  
HCM  
HCA  
LBC  
CAC4  
UCAC2  
CAC-N  
UCAC-N  
RCS2  
RCC2  
PCC  
SHC  
MCP  
GLC  
MFC  
BBS  
RRC  
GRC  
RV3\*  
NHS  
HRL  
LN  
Hand  
Chuk  
MecHnd/Chuk  
ShkAbs  
FJ  
FK  
SpdContr  
Ending

## Internal structure and parts list

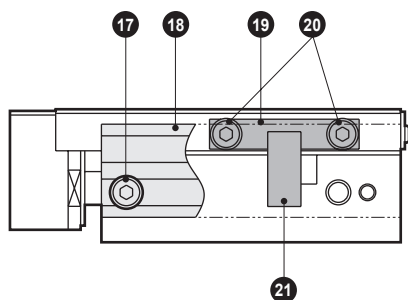
### ● LCM-4.5



### ● LCM-6.8



### ● LCM-4.5 to 8 With magnet/switch rail



### Positioning pin



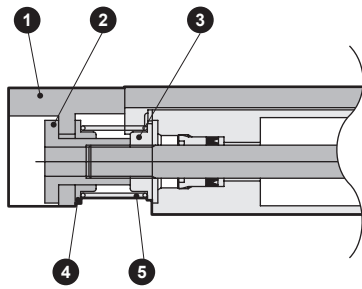
Cannot be disassembled

## Parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Floating bush A	Stainless steel		12	Cover	Acetal resin	
2	Hexagon socket head cap screw	Stainless steel		13	Stop plate	Stainless steel	
3	End plate	Aluminum alloy		14	Small machine screw	Stainless steel	
4	O-ring	Nitrile rubber		15	Floating bush B	Stainless steel	
5	Rod cover	Acetal resin		16	Cushion rubber	Urethane rubber (ø6, ø8)	
6	Rod packing	Nitrile rubber		17	Hexagon socket head cap screw	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 screw	Stainless steel	
10	Piston packing	Nitrile rubber		21	Magnet	Plastic	
11	O-ring	Nitrile rubber		22	Positioning pin	Steel	

### Internal structure and parts list

● LCM-4.5 to 8 With buffer



### Parts list

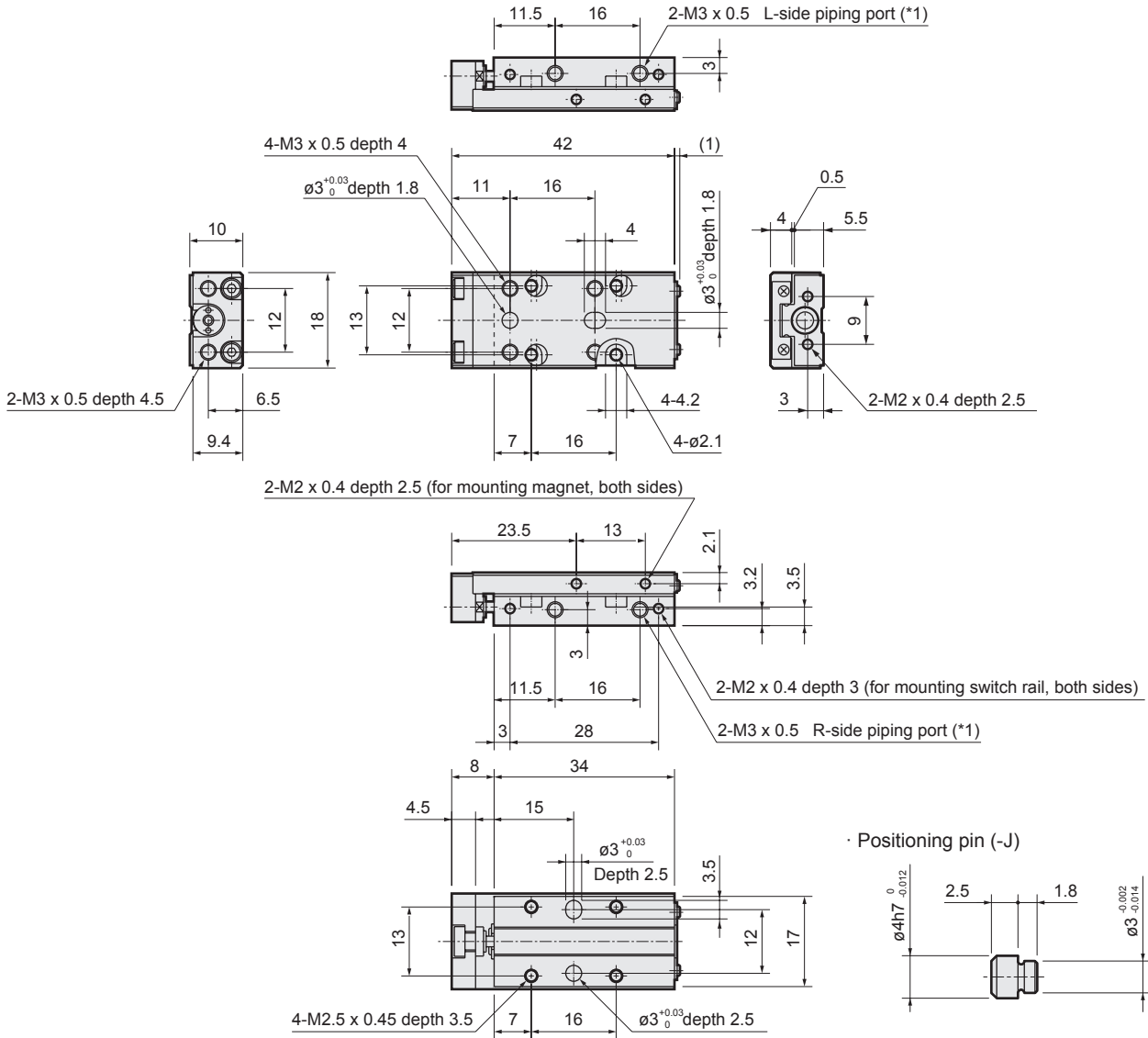
No.	Part name	Material	Remarks
1	End plate	Aluminum alloy	
2	Floating bush A	Stainless steel	
3	Floating bush B	Stainless steel	
4	Spring holder	Copper alloy	
5	Coil spring	Stainless steel	

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



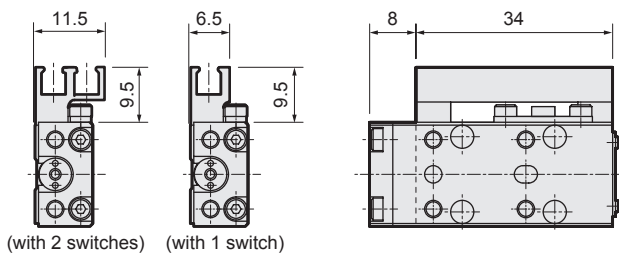
## Dimensions (bore size: $\varnothing 4.5$ )

### ● LCM-4.5

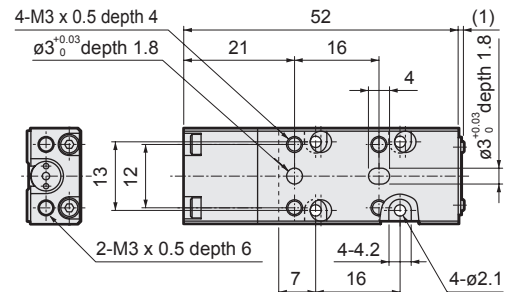


(\*1) Plug is attached to the opposite side to the piping port specified with the model No.

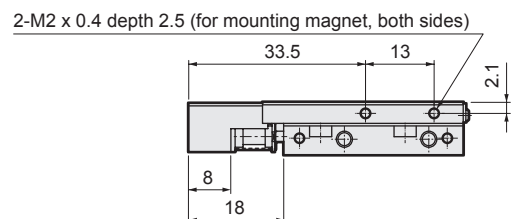
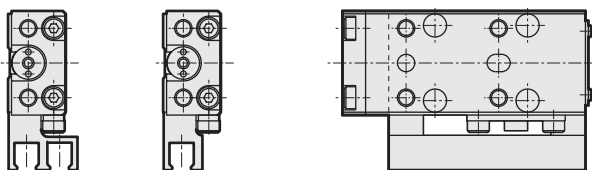
· With magnet/cylinder switch (piping direction: -R)



· With buffer (-B)



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

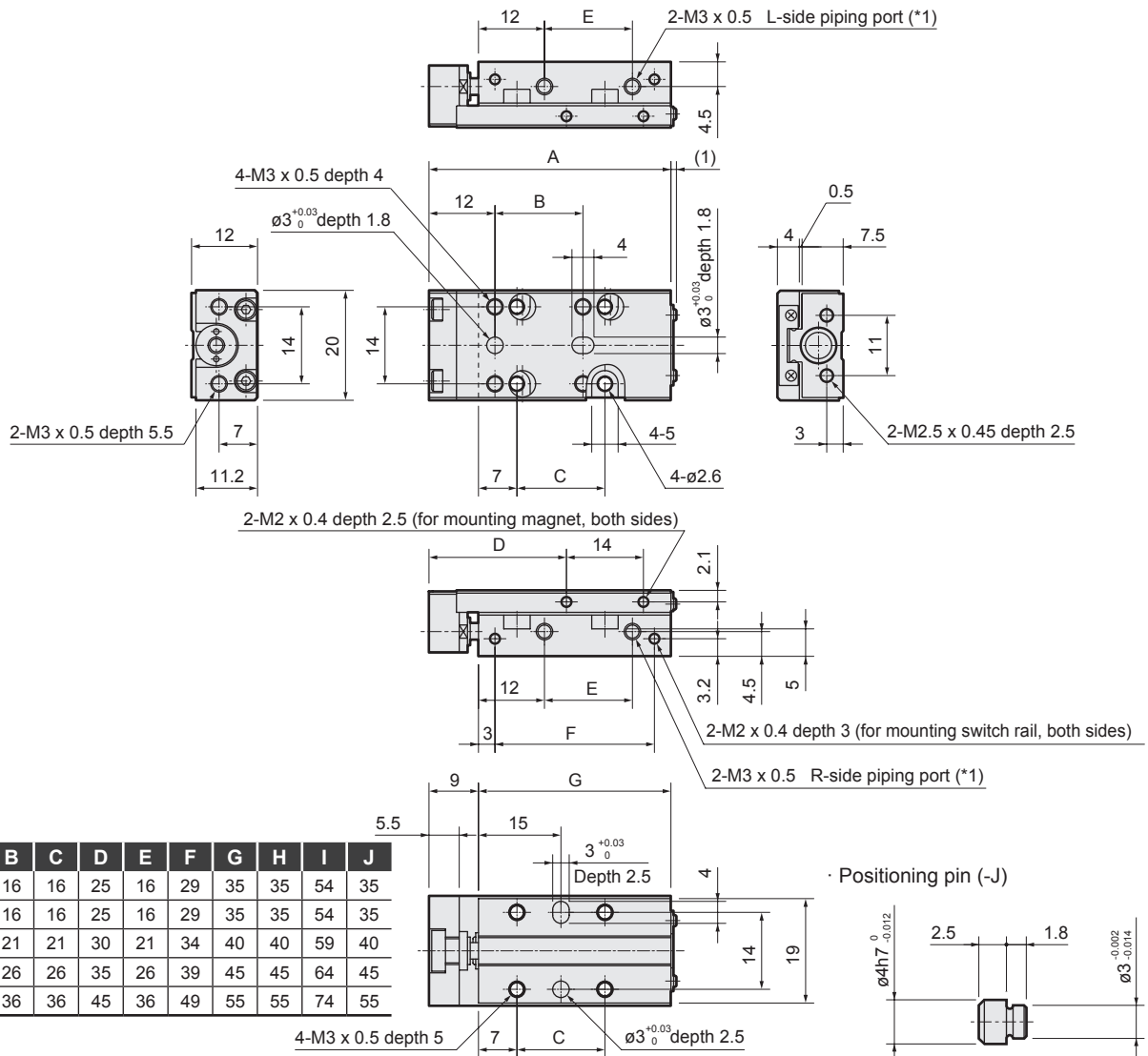


Note: Refer to page 47 for switch mounting position dimensions.

### Dimensions (bore size: $\phi 6$ )



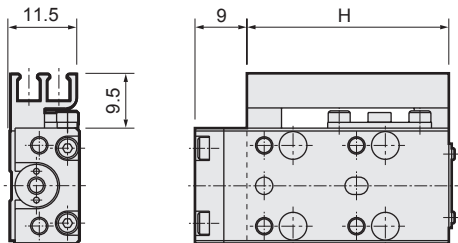
#### ● LCM-6



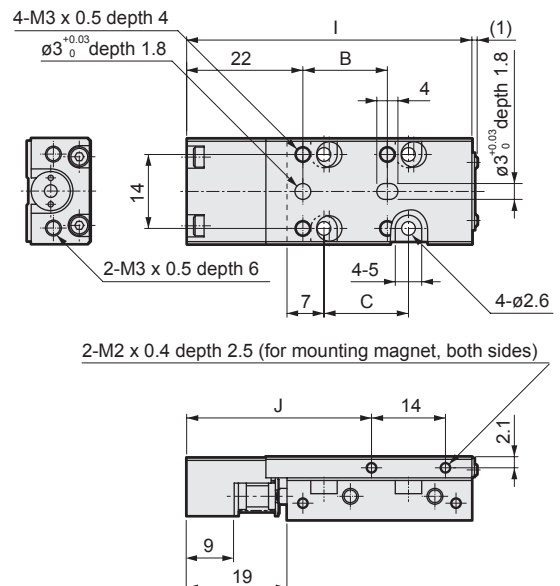
Stroke	A	B	C	D	E	F	G	H	I	J
5	44	16	16	25	16	29	35	35	54	35
10	44	16	16	25	16	29	35	35	54	35
15	49	21	21	30	21	34	40	40	59	40
20	54	26	26	35	26	39	45	45	64	45
30	64	36	36	45	36	49	55	55	74	55

(\*1) Plug is attached to the opposite side to the piping port specified with the model No.

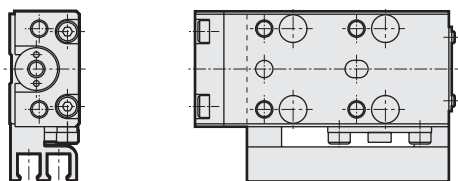
· With magnet/cylinder switch (piping direction: -R)



· With buffer (-B)



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



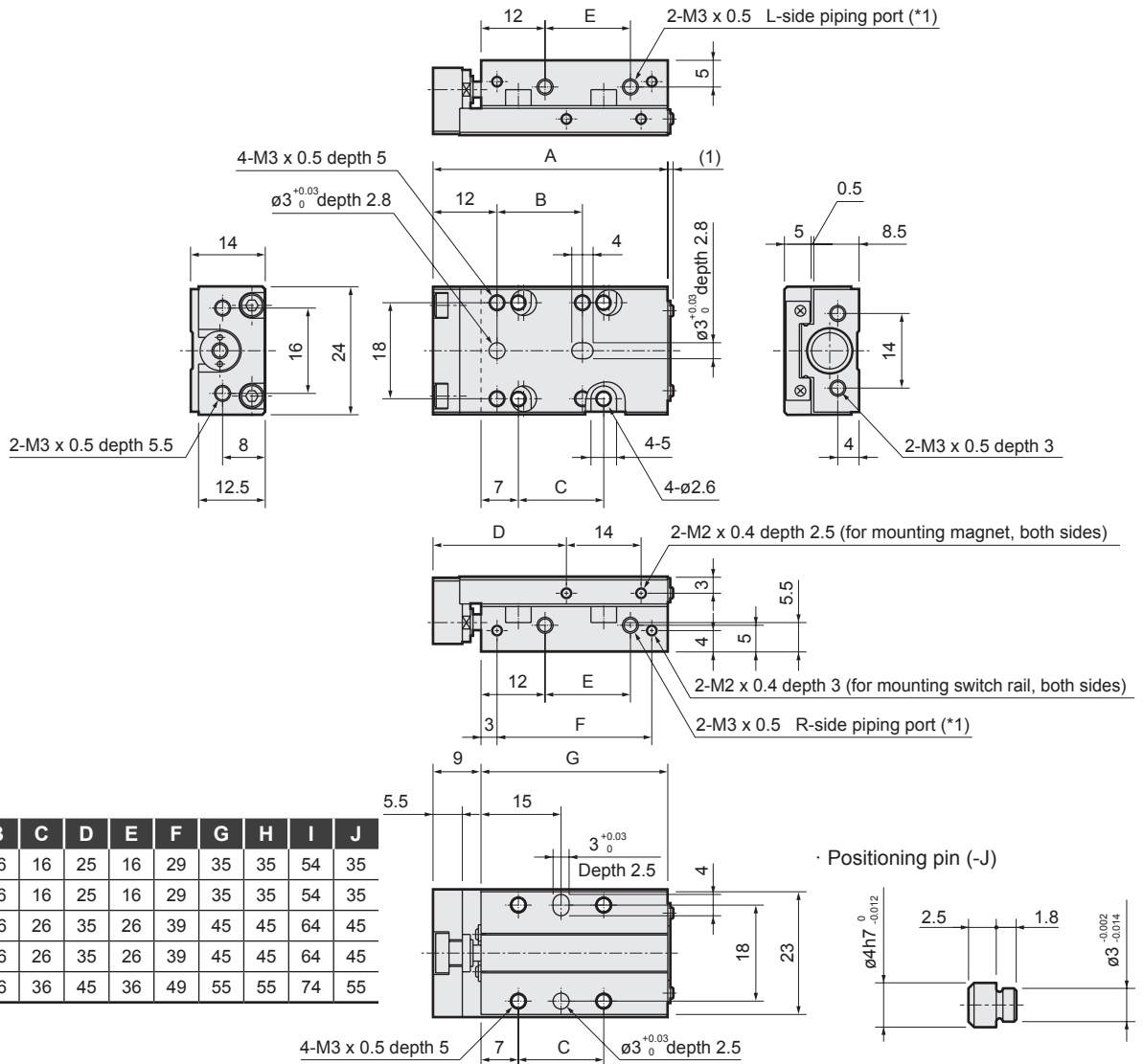
Note: Refer to page 47 for switch mounting position dimensions.

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



## Dimensions (bore size: $\varnothing 8$ )

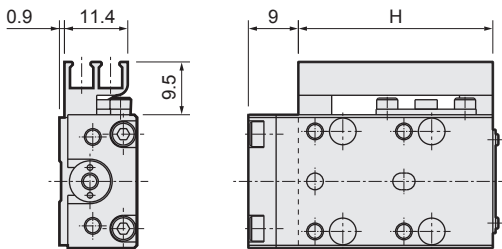
### ● LCM-8



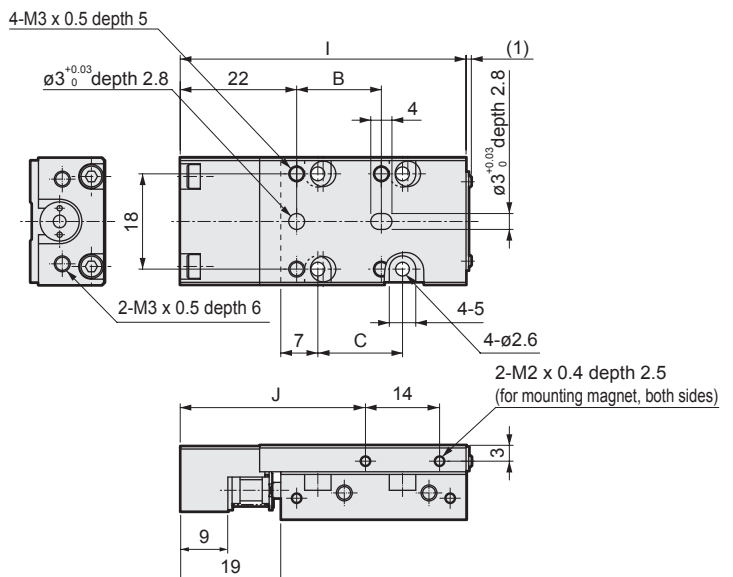
Stroke	A	B	C	D	E	F	G	H	I	J
5	44	16	16	25	16	29	35	35	54	35
10	44	16	16	25	16	29	35	35	54	35
15	54	26	26	35	26	39	45	45	64	45
20	54	26	26	35	26	39	45	45	64	45
30	64	36	36	45	36	49	55	55	74	55

(\*1) Plug is attached to the opposite side to the piping port specified with the model No.

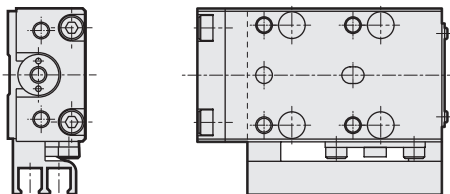
· With magnet/cylinder switch (piping direction: -R)



· With buffer (-B)



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



Note: Refer to page 47 for switch mounting position dimensions.

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# MEMO

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LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Linear slide cylinder Double acting/stroke adjustable (push)

# LCM-P Series

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



## Specifications

Descriptions		LCM-P		
Bore size	mm	$\varnothing 4.5$	$\varnothing 6$	$\varnothing 8$
Actuation		Double acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7		
Min. working pressure	MPa	0.25	0.2	0.15
Proof pressure	MPa	1.05		
Ambient temperature	$^{\circ}\text{C}$	0 to 60		
Port size		M3		
Stroke tolerance	mm	+1.0 0		
Working piston speed	mm/s	30 to 500		
Cushion		No		
Lubrication		Not required (use turbine oil class 1 ISO VG32 if lubrication is necessary))		
Adjustable stroke range	mm	-5 to 0		
Repeatability	mm	$\pm 0.02$		
Allowable absorbed energy	J	Refer to the table on page 50.		

## With buffer specifications

Descriptions		LCM-*-**-B
Buffer stroke	mm	4(MAX)
Buffer part spring load	When set N	0.3
	Operating N	0.7

## Stroke

Bore size (mm)	Standard stroke (mm)	Min. stroke with switch (mm)
$\varnothing 4.5$	5, 10	5
$\varnothing 6$	5, 10, 15, 20, 30	
$\varnothing 8$	5, 10, 15, 20, 30	

\*1: Products with stroke other than standard stroke are not available.

## Switch specifications

Descriptions	Proximity 2-wire		Proximity 3-wire		Proximity 2-wire			Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (Made to order)	F3YH/F3YV			
Applications	Programmable Controller dedicated	Programmable For controller, relay	Programmable Controller dedicated		For programmable controller, relay					
Output method	-	NPN output	-		NPN output	PNP output	NPN output			
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC			
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC $\pm 10\%$	30 VDC or less					
Load current	5 to 20mA	50 mA or less	5 to 20mA (*3)		50 mA or less					
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)			
Leakage current	1 mA or less	10 $\mu\text{A}$ or less	1 mA or less		10 $\mu\text{A}$ or less					
Weight	g		1 m: 10 3 m: 29							

\*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.

\*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.

\*3 : The max. load current is 20 mA at 25 $^{\circ}\text{C}$ . The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25 $^{\circ}\text{C}$ . (5 to 10 mA at 60 $^{\circ}\text{C}$ )

\*4 : The F-switch uses a bend-resistant lead wire.

## Cylinder weight

Unit: g

Stroke(mm)	5		10		15		20		30		Additional weight	
	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	With buffer	Weight per switch
$\varnothing 4.5$	49	53	49	53	-	-	-	-	-	-	3	Refer to the weight in the switch specifications.
$\varnothing 6$	68	73	68	73	77	83	86	92	104	111	4	
$\varnothing 8$	97	102	97	102	120	126	120	126	143	150	5	

## Theoretical thrust table

Unit: N

Bore size(mm)	Working pressure MPa					
	0.2	0.3	0.4	0.5	0.6	0.7
$\varnothing 4.5$	-	3.8	5.1	6.4	7.7	8.9
$\varnothing 6$	4.2	6.4	8.5	10.6	12.7	14.8
$\varnothing 8$	8.6	13.0	17.3	21.6	25.9	30.2

### How to order

- Without switch (without magnet for switch)

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

- With switch (built-in magnet for switch)

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

A Bore size

B Stroke

C Piping direction

D Switch model No.

E Switch quantity

F Option

### ⚠ Precautions for model No. selection

\*1: Can be omitted if the switch model No. is specified.

\*2: Available only for ø4.5.

[Example of model No.]

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

Model No. : Linear slide cylinder, double acting/stroke adjustable (push)

- A Bore size : ø6 mm
- B Stroke : 10 mm
- C Piping direction : Right when viewed from rod side
- D Switch model No. : Proximity switch F2H, lead wire 1 m
- E Switch quantity : 1 on rod side
- F Option : With positioning pin (2)

Code	Description
<b>A Bore size (mm)</b>	
4.5	ø4.5
6	ø6
8	ø8

		Bore size		
		ø4.5	ø6	ø8
5	5	●	●	●
10	10	●	●	●
15	15	-	●	●
20	20	-	●	●
30	30	-	●	●

C Piping direction	
R	Right from rod side
L	Left from rod side

D Switch model No.						
Straight lead wire	L-shaped lead wire	Contact	Voltage		Indicator	Lead wire
			AC	DC		
-	F2S*	Proximity		●	1-color LED	2-wire
F2H*	F2V*			●		
-	F3S*			●		
F3H*	F3V*			●	3-wire	
F3PH*	F3PV*			●		
F2YH*	F2YV*			●		
F3YH*	F3YV*		●	2-color LED	3-wire	

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

E Switch quantity	
R	1 on rod side
H	1 on head side
D	2

F Option	
B	With buffer
M *1	With magnet
F1 *1, 2	With magnet + switch rail (one switch groove)
F2 *1	With magnet + switch rail (two switch grooves)
J*	With positioning pin (*... number of pins)

LCM  
LCR  
LCG  
LCW  
LCX  
STM  
STG  
STS/STL  
STR2  
UCA2  
ULK\*  
JSK/M2  
JSG  
JSC3/JSC4  
USSD  
UFCD  
USC  
UB  
JSB3  
LMB  
LML  
HCM  
HCA  
LBC  
CAC4  
UCAC2  
CAC-N  
UCAC-N  
RCS2  
RCC2  
PCC  
SHC  
MCP  
GLC  
MFC  
BBS  
RRC  
GRC  
RV3\*  
NHS  
HRL  
LN  
Hand  
Chuk  
MechHnd/Chuk  
ShkAbs  
FJ  
FK  
SpdContr  
Ending

### How to order switch

- Switch body + switch rail + magnet

**LCM - F2H - R - 6 - 10**

D Switch model No.  
E Switch quantity  
A Bore size  
B Stroke

- Switch body only

**SW - F2H**

D Switch model No.

- Magnet only

**LCM - M - 6**

Magnet  
A Bore size

- Switch rail only

·ø4.5

**LCM - F1 - 4.5**  
F2

Switch rail

·ø6, ø8

**LCM - F2 - 6 - 10**

Switch rail  
A Bore size  
B Stroke

### How to order discrete positioning pin

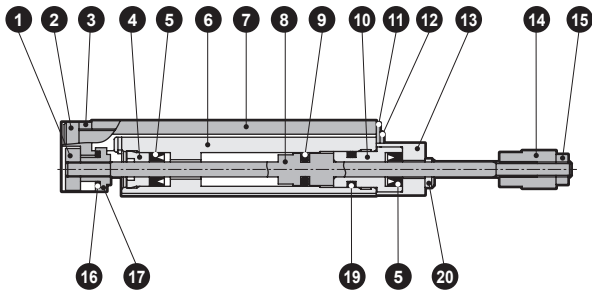
**LCM - J\* - 4.5**

Positioning pin  
Number of pins

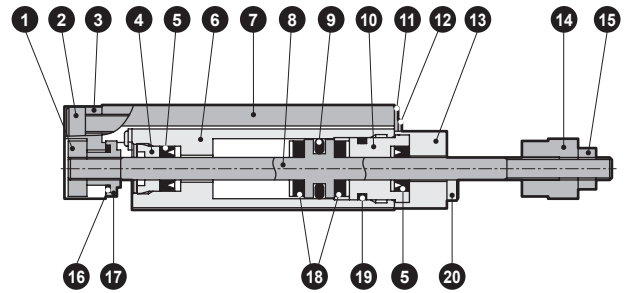
LCM  
LCR  
LCG  
LCW  
LCX  
STM  
STG  
STS/STL  
STR2  
UCA2  
ULK\*  
JSK/M2  
JSG  
JSC3/JSC4  
USSD  
UFCD  
USC  
UB  
JSB3  
LMB  
LML  
HCM  
HCA  
LBC  
CAC4  
UCAC2  
CAC-N  
UCAC-N  
RCS2  
RCC2  
PCC  
SHC  
MCP  
GLC  
MFC  
BBS  
RRC  
GRC  
RV3\*  
NHS  
HRL  
LN  
Hand  
Chuk  
MechHnd/Chuk  
ShkAbs  
FJ  
FK  
SpdContr  
Ending

## Internal structure and parts list

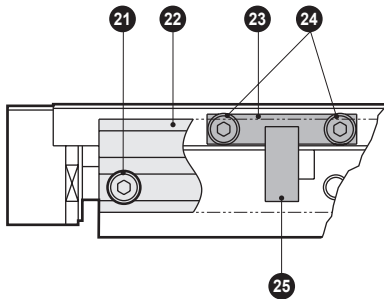
### ● LCM-P-4.5



### ● LCM-P-6,8



### ● LCM-P-4.5 to 8 With magnet/switch rail



### · Positioning pin (-J)



**Cannot be disassembled**

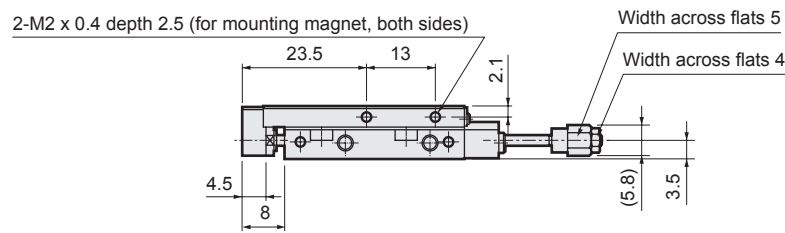
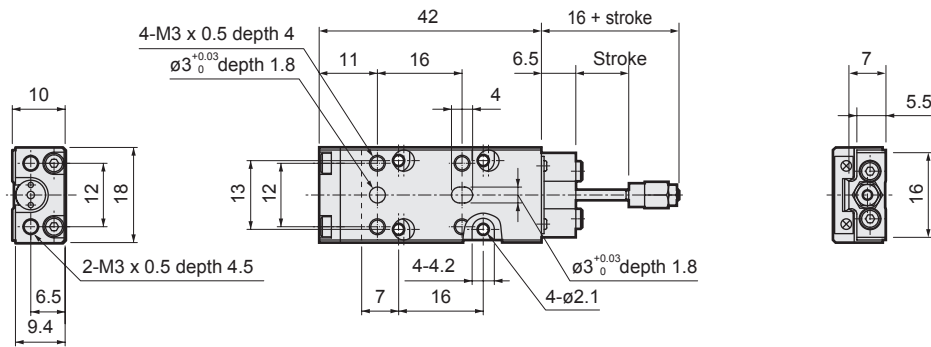
## Parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Floating bush A	Stainless steel		14	Adjustable stopper	Steel	Nickel plating
2	Hexagon socket head cap screw	Stainless steel		15	Hexagon nut	ø4.5 Stainless steel	
3	End plate	Aluminum alloy				ø6,ø8 Steel	Nickel plating
4	Rod cover	Acetal resin		16	O-ring	Nitrile rubber	
5	Rod packing	Nitrile rubber		17	Floating bush B	Stainless steel	
6	Cylinder body	Stainless steel		18	Cushion rubber	Urethane rubber (ø6, ø8)	
7	Slide table	Stainless steel		19	O-ring	Nitrile rubber	
8	Piston	Stainless steel		20	Hexagon socket head cap screw	Stainless steel	
9	Piston packing	Nitrile rubber		21	Hexagon socket head cap screw	Stainless steel	
10	Cover	Aluminum alloy		22	Switch rail	Aluminum alloy	
11	Stop plate	Stainless steel		23	Plate	Aluminum alloy	
12	Small machine screw	Stainless steel		24	Hexagon socket head cap screw	Stainless steel	
13	Stopper A	Steel	Nickel plating	25	Magnet	Plastic	
				26	Positioning pin	Steel	

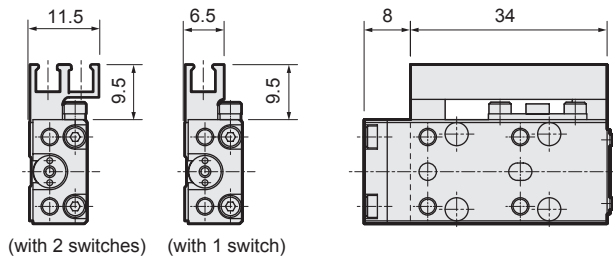
## Dimensions (bore size: $\varnothing 4.5$ )



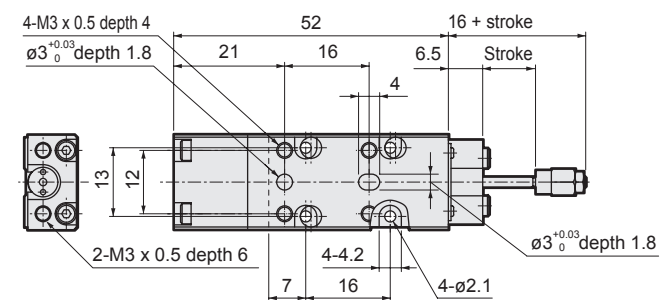
### ● LCM-P-4.5



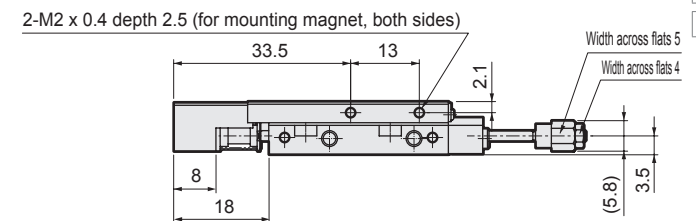
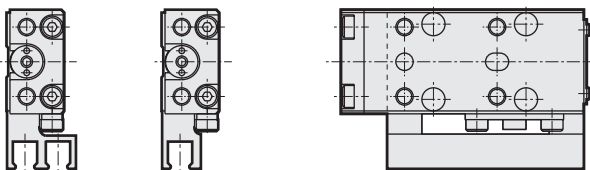
· With magnet/cylinder switch (piping direction: -R)



· With buffer (-B)



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



Note : Refer to page 47 for switch mounting position dimensions.

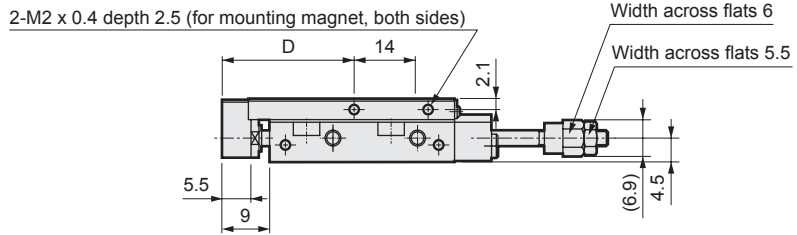
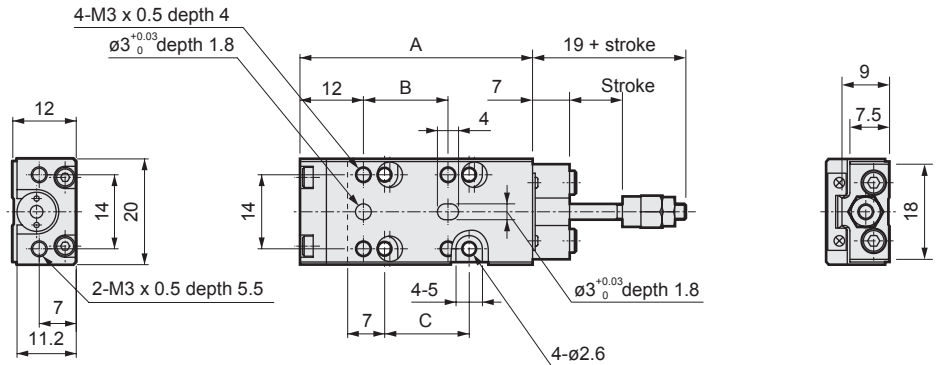
Dimensions other than those listed above are the same as those of double acting/single rod. Refer to page 14.

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



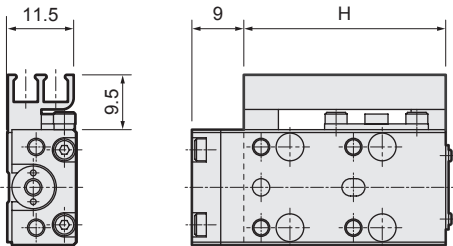
## Dimensions (bore size: $\phi 6$ )

### ● LCM-P-6

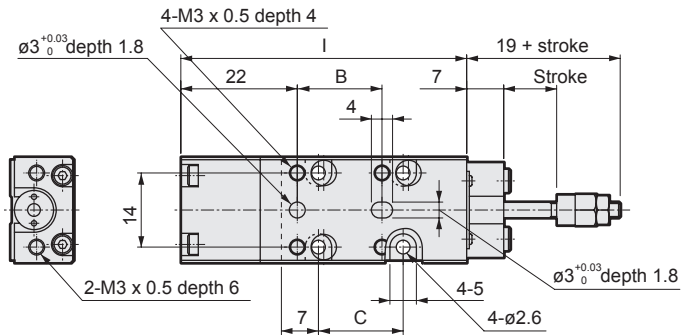


Stroke	A	B	C	D	H	I	J
5	44	16	16	25	35	54	35
10	44	16	16	25	35	54	35
15	49	21	21	30	40	59	40
20	54	26	26	35	45	64	45
30	64	36	36	45	55	74	55

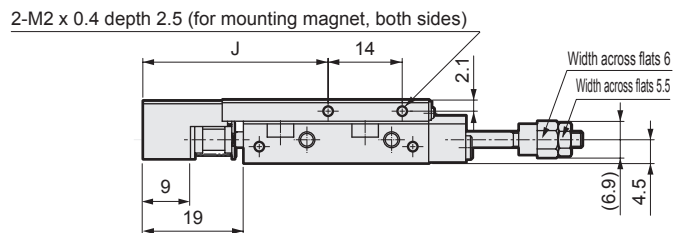
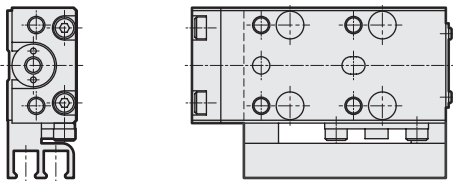
· With magnet/cylinder switch (piping direction: -R)



· With buffer (-B)



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



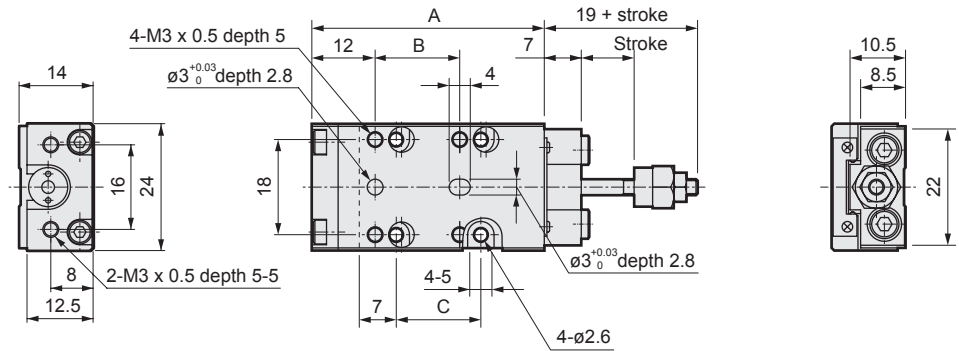
Note : Refer to page 47 for switch mounting position dimensions.

Dimensions other than those listed above are the same as those of double acting/single rod. Refer to page 15.

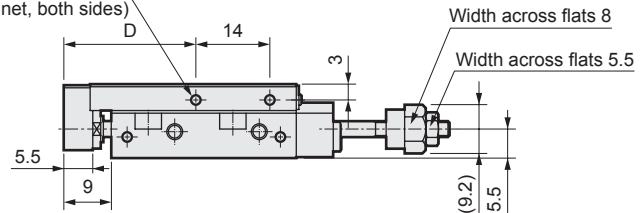
### Dimensions (bore size: $\varnothing 8$ )



#### ● LCM-P-8

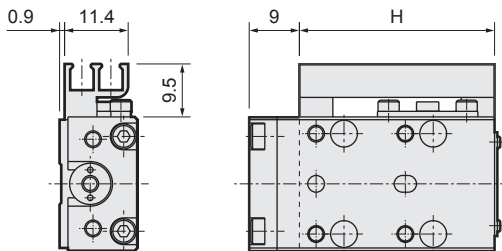


2-M2 x 0.4 depth 2.5  
(for mounting magnet, both sides)

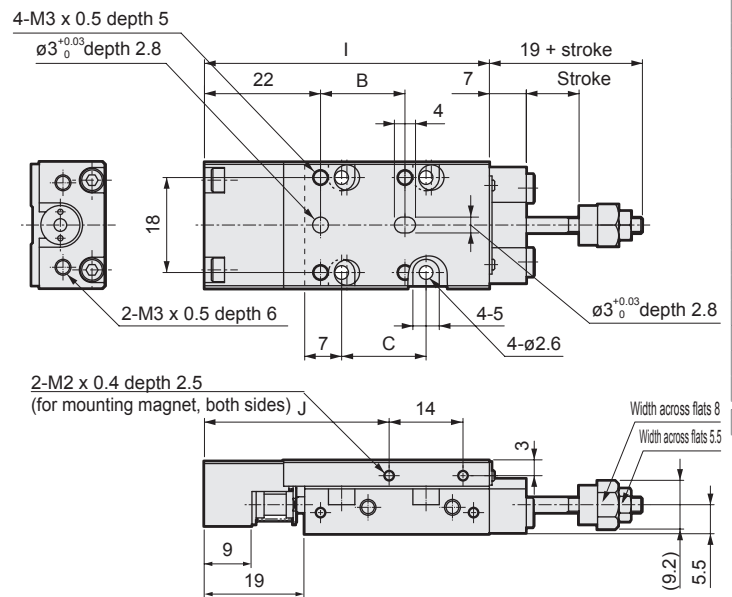


Stroke	A	B	C	D	H	I	J
5	44	16	16	25	35	54	35
10	44	16	16	25	35	54	35
15	54	26	26	35	45	64	45
20	54	26	26	35	45	64	45
30	64	36	36	45	55	74	55

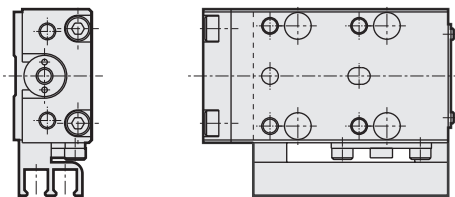
· With magnet/cylinder switch (piping direction: -R)



· With buffer (-B)



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

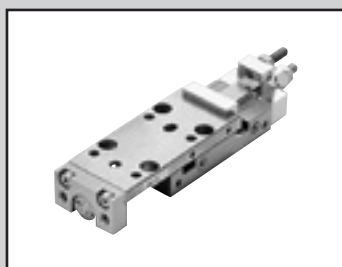


Note : Refer to page 47 for switch mounting position dimensions.

Dimensions other than those listed above are the same as those of double acting/single rod. Refer to page 16.

- LCM
- LCR
- LCG
- LCW
- LCX
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK\*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- UB
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCS2
- RCC2
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3\*
- NHS
- HRL
- LN
- Hand
- Chuk
- MechHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending

LCM  
LCR  
LCG  
LCW  
LCX  
STM  
STG  
STS/STL  
STR2  
UCA2  
ULK\*  
JSK/M2  
JSG  
JSC3/JSC4  
USSD  
UFCD  
USC  
UB  
JSB3  
LMB  
LML  
HCM  
HCA  
LBC  
CAC4  
UCAC2  
CAC-N  
UCAC-N  
RCS2  
RCC2  
PCC  
SHC  
MCP  
GLC  
MFC  
BBS  
RRC  
GRC  
RV3\*  
NHS  
HRL  
LN  
Hand  
Chuk  
MechHnd/Chuk  
ShkAbs  
FJ  
FK  
SpdContr  
Ending

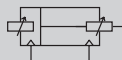


Linear slide cylinder double acting/stroke adjustable (push/pull)

# LCM-R Series

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

JIS symbol



## Specifications

Descriptions		LCM-R		
Bore size	mm	$\varnothing 4.5$	$\varnothing 6$	$\varnothing 8$
Actuation		Double acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7		
Min. working pressure	MPa	0.25	0.2	0.15
Proof pressure	MPa	1.05		
Ambient temperature	$^{\circ}\text{C}$	0 to 60		
Port size		M3		
Stroke tolerance	mm	+1.0 0		
Working piston speed	mm/s	30 to 500		
Cushion	Push	No		
	Pull	No		
Lubrication		Not required (use turbine oil class 1 ISO VG32 if lubrication is necessary)		
Adjustable stroke range	Push	mm	-5 to 0	
	Pull	mm	-7 to 0	
Repeatability	mm	$\pm 0.02$		
Allowable absorbed energy	J	Refer to the table on page 50.		

## With buffer specifications

Descriptions		LCM-***-B
Buffer stroke	mm	4(MAX)
Buffer part spring load	When set	N 0.3
	Operating	N 0.7

## Stroke

Bore size (mm)	Standard stroke (mm)	Min. stroke with switch (mm)
$\varnothing 4.5$	5/10	5
$\varnothing 6$	5/10/15/20/30	
$\varnothing 8$	5/10/15/20/30	

\*1: Products with stroke other than standard stroke are not available.

## Switch specifications

Descriptions	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (Made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	Programmable For controller, relay	Programmable Controller dedicated		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC $\pm 10\%$	30 VDC or less		
Load current	5 to 20mA	50 mA or less	5 to 20mA (*3)		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/greenLED (Lit when ON)	Yellow LED (Lit when ON)	YellowLED (Lit when ON)	Red/greenLED (Lit when ON)
Leakage current	1 mA or less	10 $\mu\text{A}$ or less	1 mA or less		10 $\mu\text{A}$ or less		
Weight	g		1 m: 10 3 m: 29				

\*3: Max. load current: 20mA at 25 $^{\circ}\text{C}$ . The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25 $^{\circ}\text{C}$ ... (5 to 10mA with 60 $^{\circ}\text{C}$ ...)

\*4: The F-switch uses a bend-resistant lead wire.

## Cylinder weight

Unit: g

Stroke(mm)	5		10		15		20		30		Additional weight	
	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	With buffer	Weight per switch
$\varnothing 4.5$	52	56	52	56	-	-	-	-	-	-	3	Refer to the weight in the switch specifications.
$\varnothing 6$	71	76	71	76	80	86	89	95	107	114	4	
$\varnothing 8$	100	105	100	105	123	129	123	129	146	153	5	

## Theoretical thrust table

Unit: N

Bore size(mm)	Working pressure MPa					
	0.2	0.3	0.4	0.5	0.6	0.7
$\varnothing 4.5$	-	3.8	5.1	6.4	7.7	8.9
$\varnothing 6$	4.2	6.4	8.5	10.6	12.7	14.8
$\varnothing 8$	8.6	13.0	17.3	21.6	25.9	30.2

### How to order

- Without switch (without magnet for switch)

**LCM-R - 6 - 10 - R - J2**

- With switch (built-in magnet for switch)

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

A Bore size

B Stroke

C Piping direction

D Switch model No.

E Switch quantity

F Option

### ⚠ Precautions for model No. selection

\*1: Can be omitted if the switch model No. is specified.

\*2: Available only for ø4.5.

[Example of model No.]

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

Model : Linear slide cylinder,  
Double acting/stroke adjustable/push-pull type

- A Bore size : ø6 mm
- B Stroke : 10 mm
- C Piping direction : Right when viewed from rod side
- D Switch model No. : Proximity switch F2H, lead wire 1 m
- E Switch quantity : 1 on rod side
- F Option : With positioning pin (2)

Code	Description
<b>A Bore size (mm)</b>	
4.5	ø4.5
6	ø6
8	ø8

		Bore size		
		ø4.5	ø6	ø8
5	5	●	●	●
10	10	●	●	●
15	15	-	●	●
20	20	-	●	●
30	30	-	●	●

C Piping direction	
R	Right from rod side
L	Left from rod side

D Switch model No.						
Straight lead wire	L-shaped lead wire	Contact	Voltage		Indicator	Lead wire
			AC	DC		
-	F2S*	Proximity		●	1-color LED	2-wire
F2H*	F2V*			●		
-	F3S*			●	3-wire	
F3H*	F3V*			●		
F3PH*	F3PV*			●	1 color display (PNP output) (made to order)	3-wire
F2YH*	F2YV*			●	2-color LED	2-wire
F3YH*	F3YV*		●	LED	3-wire	

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

E Switch quantity	
R	1 on rod side
H	1 on head side
D	2

F Option	
B	With buffer
M *1	With magnet
F1 *1, 2	With magnet + switch rail (one switch groove)
F2 *1	With magnet + switch rail (two switch grooves)
J*	With positioning pin (*... number of pins)

LCM  
LCR  
LCG  
LCW  
LCX  
STM  
STG  
STS/STL  
STR2  
UCA2  
ULK\*  
JSK/M2  
JSG  
JSC3/JSC4  
USSD  
UFCD  
USC  
UB  
JSB3  
LMB  
LML  
HCM  
HCA  
LBC  
CAC4  
UCAC2  
CAC-N  
UCAC-N  
RCS2  
RCC2  
PCC  
SHC  
MCP  
GLC  
MFC  
BBS  
RRC  
GRC  
RV3\*  
NHS  
HRL  
LN  
Hand  
Chuk  
MechHnd/Chuk  
ShkAbs  
FJ  
FK  
SpdContr  
Ending

### How to order switch

- Switch body + switch rail + magnet

**LCM - F2H - R - 6 - 10**

D Switch model No.  
E Switch quantity  
A Bore size  
B Stroke

- Switch body only

**SW - F2H**

D Switch model No.

- Magnet only

**LCM - M - 6**

Magnet  
A Bore size

- Switch rail only

ø4.5

**LCM - F1 - F2 - 4.5**

Switch rail

ø6, ø8

**LCM - F2 - 6 - 10**

Switch rail  
A Bore size  
B Stroke

### How to order discrete positioning pin

**LCM - J\* - 4.5**

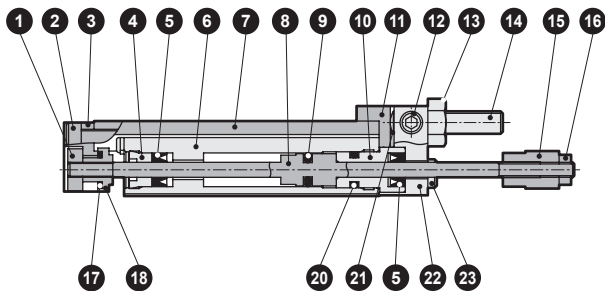
Positioning pin  
Number of pins



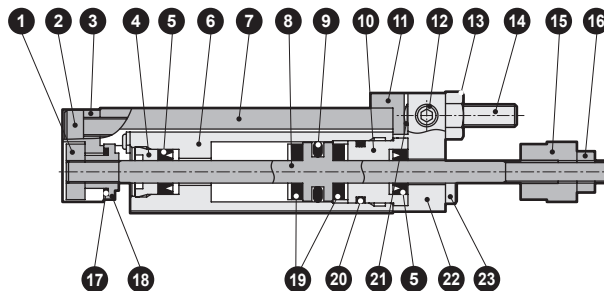
LCM  
LCR  
LCG  
LCW  
LCX  
STM  
STG  
STS/STL  
STR2  
UCA2  
ULK\*  
JSK/M2  
JSG  
JSC3/JSC4  
USSD  
UFCD  
USC  
UB  
JSB3  
LMB  
LML  
HCM  
HCA  
LBC  
CAC4  
UCAC2  
CAC-N  
UCAC-N  
RCS2  
RCC2  
PCC  
SHC  
MCP  
GLC  
MFC  
BBS  
RRC  
GRC  
RV3\*  
NHS  
HRL  
LN  
Hand  
Chuk  
MecHnd/Chuk  
ShkAbs  
FJ  
FK  
SpdContr  
Ending

## Internal structure and parts list

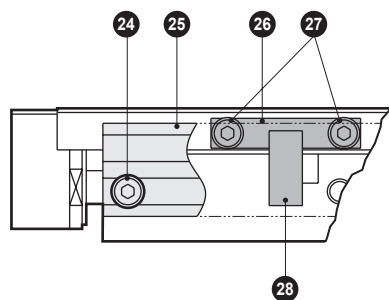
### ● LCM-R-4.5



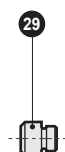
### ● LCM-R-6,8



### ● LCM-R-4.5 to 8 With magnet/switch rail



### · Positioning pin (-J)



**Cannot be disassembled**

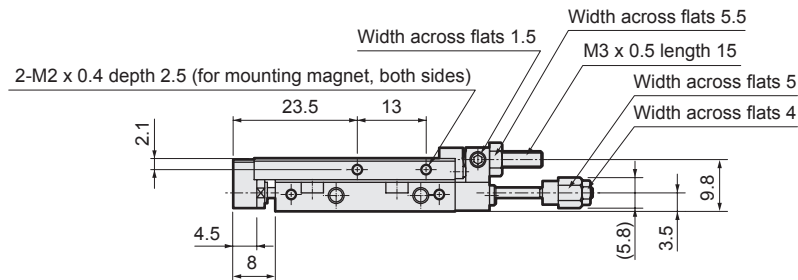
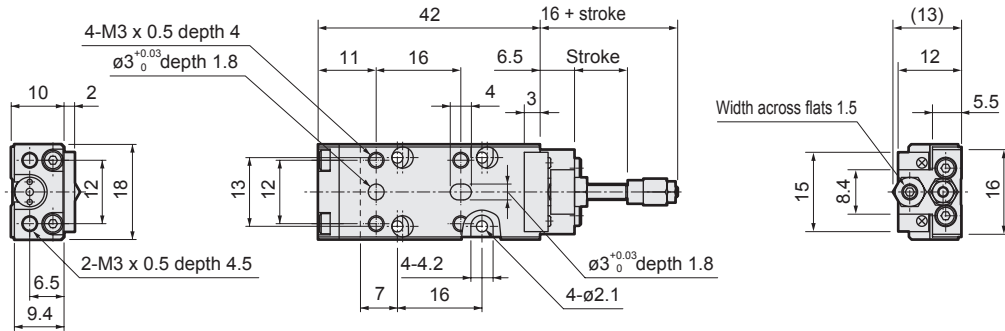
## Parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Floating bush A	Stainless steel		16	Hexagon nut	ø4.5 Stainless steel	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	Acetal resin		19	Cushion rubber	Urethane rubber (ø6, ø8)	
5	Rod packing	Nitrile rubber		20	O-ring	Nitrile rubber	
6	Cylinder body	Stainless steel		21	Small 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	Small 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	Adjustable stopper	Steel	Nickel plating				

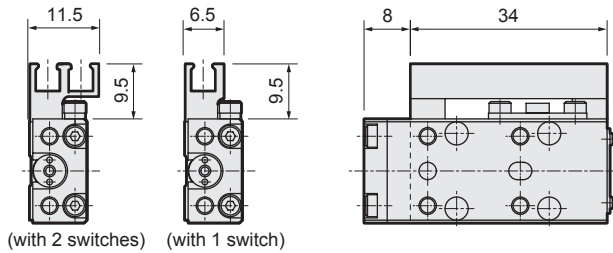
## Dimensions (bore size: $\varnothing 4.5$ )



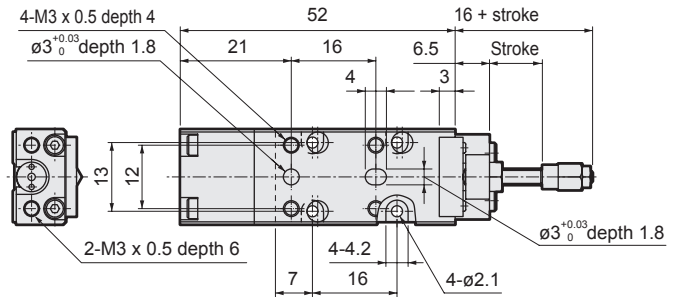
### ● LCM-R-4.5



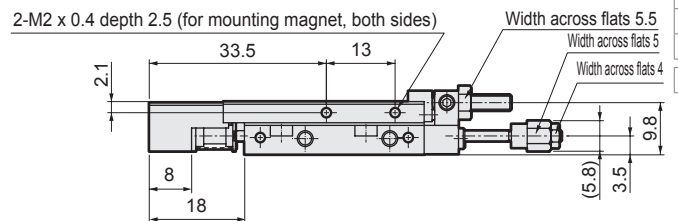
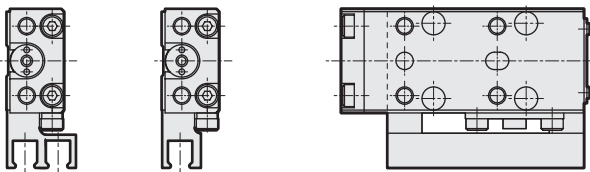
· With magnet/cylinder switch (piping direction: -R)



· With buffer (-B)



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



Note : Refer to page 47 for switch mounting position dimensions.

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

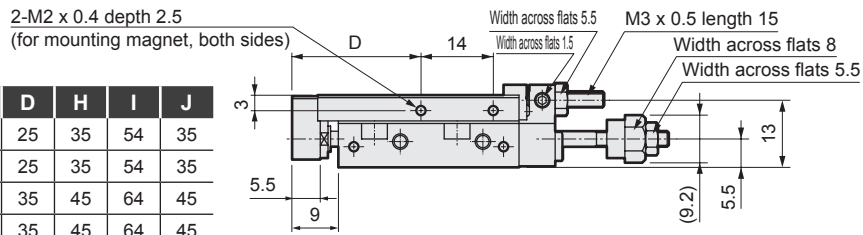
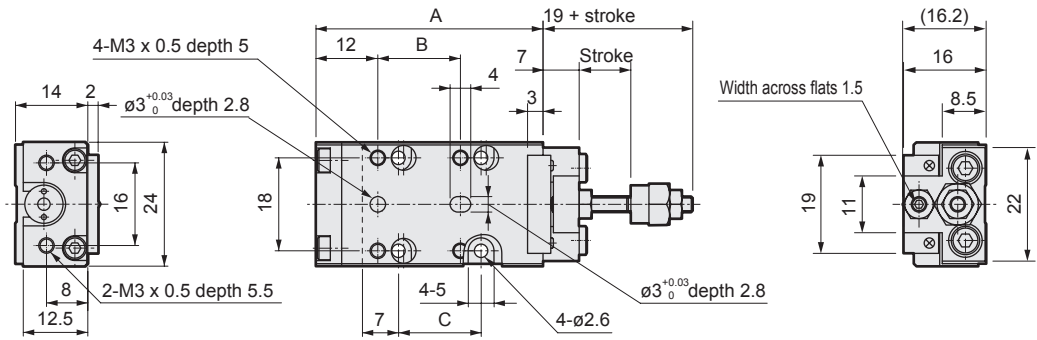
Dimensions other than those listed above are the same as those of double acting/single rod. Refer to page 14.



### Dimensions (bore size: $\varnothing 8$ )

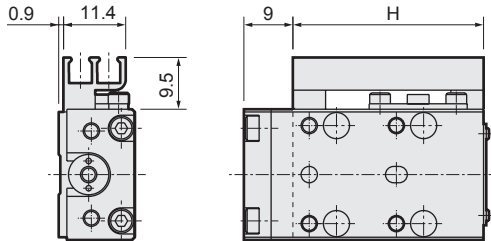


● LCM-R-8

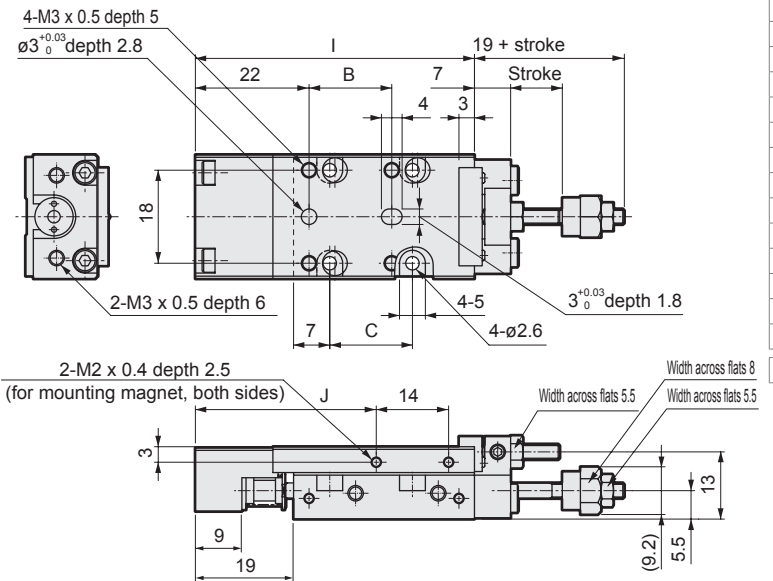


Stroke	A	B	C	D	H	I	J
5	44	16	16	25	35	54	35
10	44	16	16	25	35	54	35
15	54	26	26	35	45	64	45
20	54	26	26	35	45	64	45
30	64	36	36	45	55	74	55

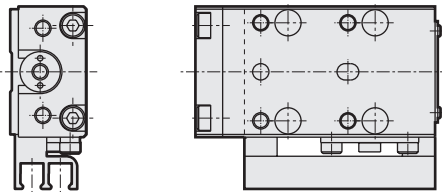
· With magnet/cylinder switch (piping direction: -R)



· With buffer (-B)



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



Note : Refer to page 47 for switch mounting position dimensions.

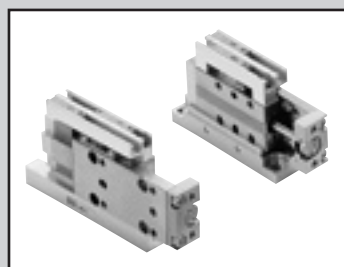
Dimensions other than those listed above are the same as those of double acting/single rod. Refer to page 16.

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Linear slide cylinder Double acting/side mounting

# LCM-A Series

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



## Specifications

Descriptions		LCM-A		
Bore size	mm	$\varnothing 4.5$	$\varnothing 6$	$\varnothing 8$
Actuation		Double acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7		
Min. working pressure	MPa	0.2		0.15
Proof pressure	MPa	1.05		
Ambient temperature	$^{\circ}\text{C}$	0 to 60		
Port size		M3		
Stroke tolerance	mm	+1.0 0		
Working piston speed	mm/s	30 to 500		
Cushion		No	With rubber cushion	
Lubrication		Not required (use turbine oil class 1 ISO VG32 if lubrication is necessary)		
Allowable absorbed energy	J	Refer to the table on page 50.		

## With buffer specifications

Descriptions		LCM-***-B
Buffer stroke	mm	4(MAX)
Buffer part spring load	When set	N 0.3
	Operating	N 0.7

## Stroke

Bore size (mm)	Standard stroke (mm)	Min. stroke with switch (mm)
$\varnothing 4.5$	5/10	5
$\varnothing 6$	5/10/15/20/30	
$\varnothing 8$	5/10/15/20/30	

\*1: Products with stroke other than standard stroke are not available.

## Switch specifications

Descriptions	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (Made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	Programmable For controller, relay	Programmable Controller dedicated		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC $\pm 10\%$	30 VDC or less		
Load current	5 to 20mA	50 mA or less	5 to 20mA (*3)		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 $\mu\text{A}$ or less	1 mA or less		10 $\mu\text{A}$ or less		
Weight	g		1 m: 10 3 m: 29				

\*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.

\*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.

\*3 : The max. load current is 20 mA at 25 $^{\circ}\text{C}$ . The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25 $^{\circ}\text{C}$ . (5 to 10 mA at 60 $^{\circ}\text{C}$ )

\*4 : The F-switch uses a bend-resistant lead wire.

## Cylinder weight

Unit: g

Stroke(mm)	5		10		15		20		30		Additional weight	
	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	With buffer	Weight per switch
$\varnothing 4.5$	59	63	59	63	-	-	-	-	-	-	3	Refer to the weight in the switch specifications.
$\varnothing 6$	78	83	78	83	88	94	98	104	118	125	4	
$\varnothing 8$	106	111	106	111	132	138	132	138	158	165	5	

## 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
$\varnothing 4.5$	Push	3.2	4.8	6.4	8.0	9.5	11.1
	Pull	2.6	3.8	5.1	6.4	7.7	8.9
$\varnothing 6$	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
$\varnothing 8$	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

### How to order

- Without switch (without magnet for switch)

**LCM-A - 6 - 10 - R - J2**

- With switch (built-in magnet for switch)

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

A Bore size

B Stroke

C Table direction

D Switch model No.

E Switch quantity

F Option

### ⚠ Precautions for model No. selection

- \*1: Can be omitted if the switch model No. is specified.
- \*2: Available only for ø4.5.

[Example of model No.]

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

Model : Linear slide cylinder, double acting/side mounting

- A Bore size : ø6 mm
- B Stroke : 10 mm
- C Piping direction : Right when viewed from rod side
- D Switch model No. : Proximity switch F2H, lead wire 1 m
- E Switch quantity : 1 on rod side
- F Option : With positioning pin (2)

Code	Description
<b>A Bore size (mm)</b>	
4.5	ø4.5
6	ø6
8	ø8

B Stroke (mm)		Bore size		
		ø4.5	ø6	ø8
5	5	●	●	●
10	10	●	●	●
15	15	-	●	●
20	20	-	●	●
30	30	-	●	●

C Table direction	
R	Right from rod side
L	Left from rod side

D Switch model No.						
Straight lead wire	L-shaped lead wire	Contact	Voltage		Indicator	Lead wire
			AC	DC		
-	F2S*	Proximity		●	1-color LED	2-wire
F2H*	F2V*			●		
-	F3S*			●	3-wire	
F3H*	F3V*			●		
F3PH*	F3PV*			●	1 color display (PNP output) (made to order)	3-wire
F2YH*	F2YV*			●	2-color LED	2-wire
F3YH*	F3YV*		●	LED	3-wire	

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

E Switch quantity	
R	1 on rod side
H	1 on head side
D	2

F Option	
B	With buffer
M *1	With magnet
F1 *1, 2	With magnet + switch rail (one switch groove)
F2 *1	With magnet + switch rail (two switch grooves)
J*	With positioning pin (*... number of pins)

LCM  
LCR  
LCG  
LCW  
LCX  
STM  
STG  
STS/STL  
STR2  
UCA2  
ULK\*  
JSK/M2  
JSG  
JSC3/JSC4  
USSD  
UFCD  
USC  
UB  
JSB3  
LMB  
LML  
HCM  
HCA  
LBC  
CAC4  
UCAC2  
CAC-N  
UCAC-N  
RCS2  
RCC2  
PCC  
SHC  
MCP  
GLC  
MFC  
BBS  
RRC  
GRC  
RV3\*  
NHS  
HRL  
LN  
Hand  
Chuk  
MechHnd/Chuk  
ShkAbs  
FJ  
FK  
SpdContr  
Ending

### How to order switch

- Switch body + switch rail + magnet

**LCM - F2H - R - 6 - 10**

D Switch model No.

E Switch quantity

A Bore size

B Stroke

- Switch body only

**SW - F2H**

D Switch model No.

- Magnet only

**LCM - M - 6**

Magnet

A Bore size

- Switch rail only

ø4.5

**LCM - F1 - F2 - 4.5**

Switch rail

ø6, ø8

**LCM - F2 - 6 - 10**

Switch rail

A Bore size

B Stroke

### How to order discrete positioning pin

**LCM - J\* - 4.5**

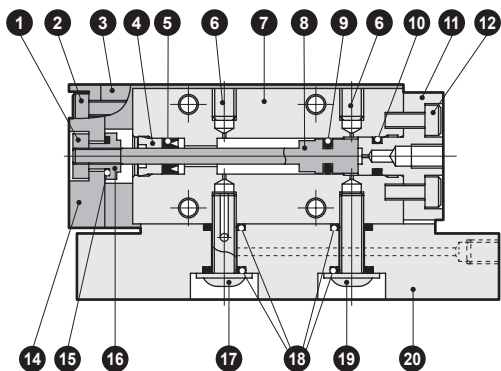
Positioning pin

Number of pins

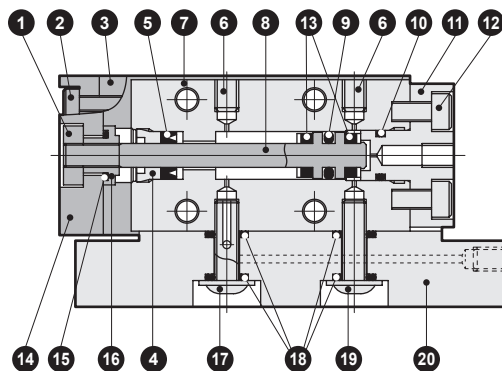
LCM  
LCR  
LCG  
LCW  
LCX  
STM  
STG  
STS/STL  
STR2  
UCA2  
ULK\*  
JSK/M2  
JSG  
JSC3/JSC4  
USSD  
UFCD  
USC  
UB  
JSB3  
LMB  
LML  
HCM  
HCA  
LBC  
CAC4  
UCAC2  
CAC-N  
UCAC-N  
RCS2  
RCC2  
PCC  
SHC  
MCP  
GLC  
MFC  
BBS  
RRC  
GRC  
RV3\*  
NHS  
HRL  
LN  
Hand  
Chuk  
MecHnd/Chuk  
ShkAbs  
FJ  
FK  
SpdContr  
Ending

## Internal structure and parts list

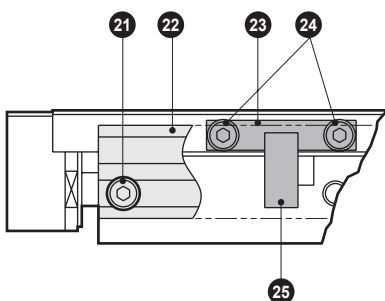
● LCM-A-4.5



● LCM-A-6,8



● LCM-R-4.5 to 8-F With magnet/switch rail



· Positioning pin (-J)



**Cannot be disassembled**

### Parts list

No.	Part name	Material	Remarks	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	Acetal resin		17	Hexagon socket head cap screw	Stainless steel	
5	Rod packing	Nitrile rubber		18	O-ring	Nitrile rubber	
6	Small 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 (ø6, ø8)		26	Positioning pin	Steel	

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# MEMO

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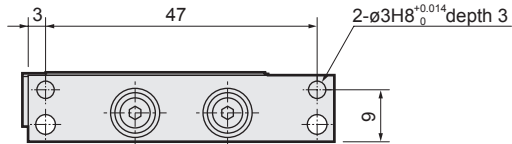
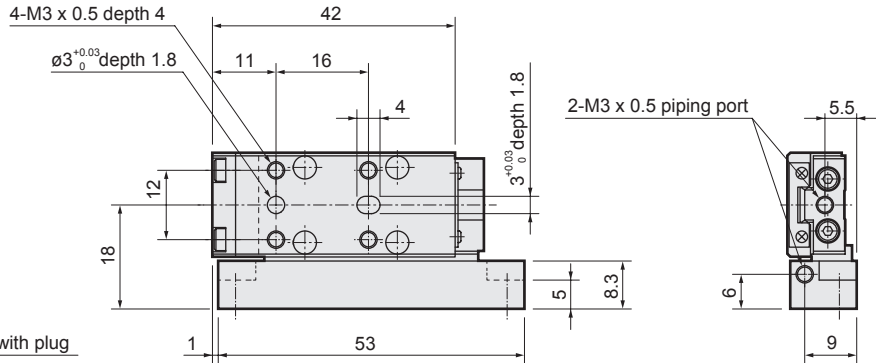
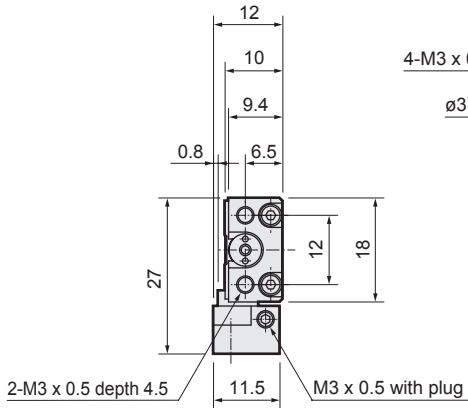
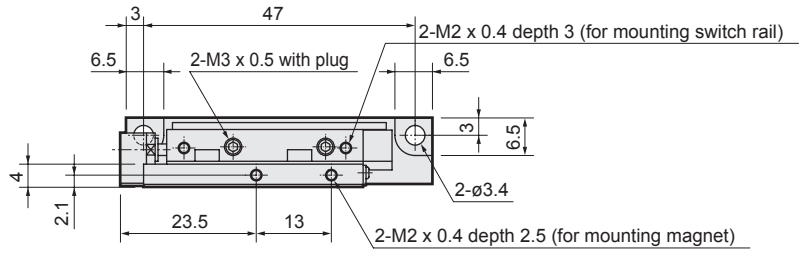
LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
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Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



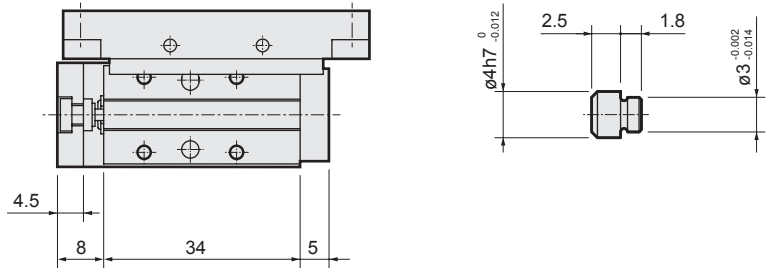


## Dimensions (bore size: $\varnothing 4.5$ )

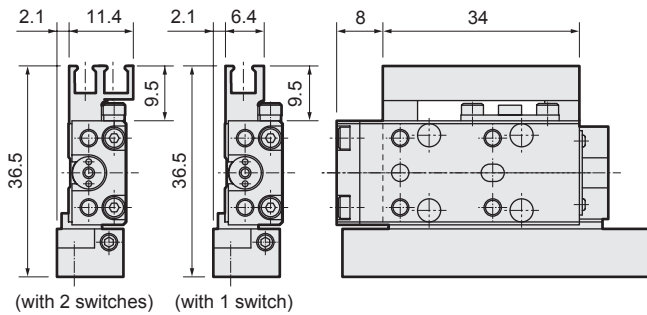
● LCM-A-4.5-R (piping direction: right)



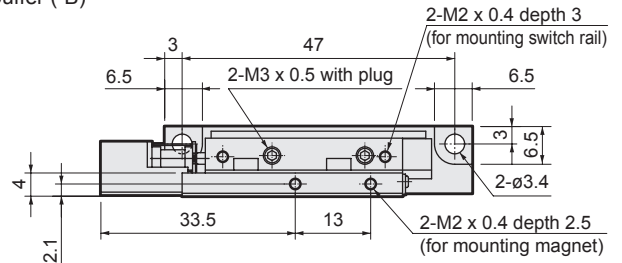
· Positioning pin (-J)



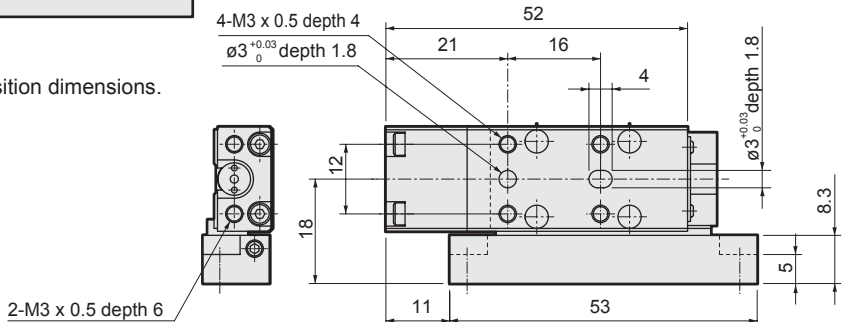
· With magnet/cylinder switch



· With buffer (-B)



Note : Refer to page 47 for switch mounting position dimensions.

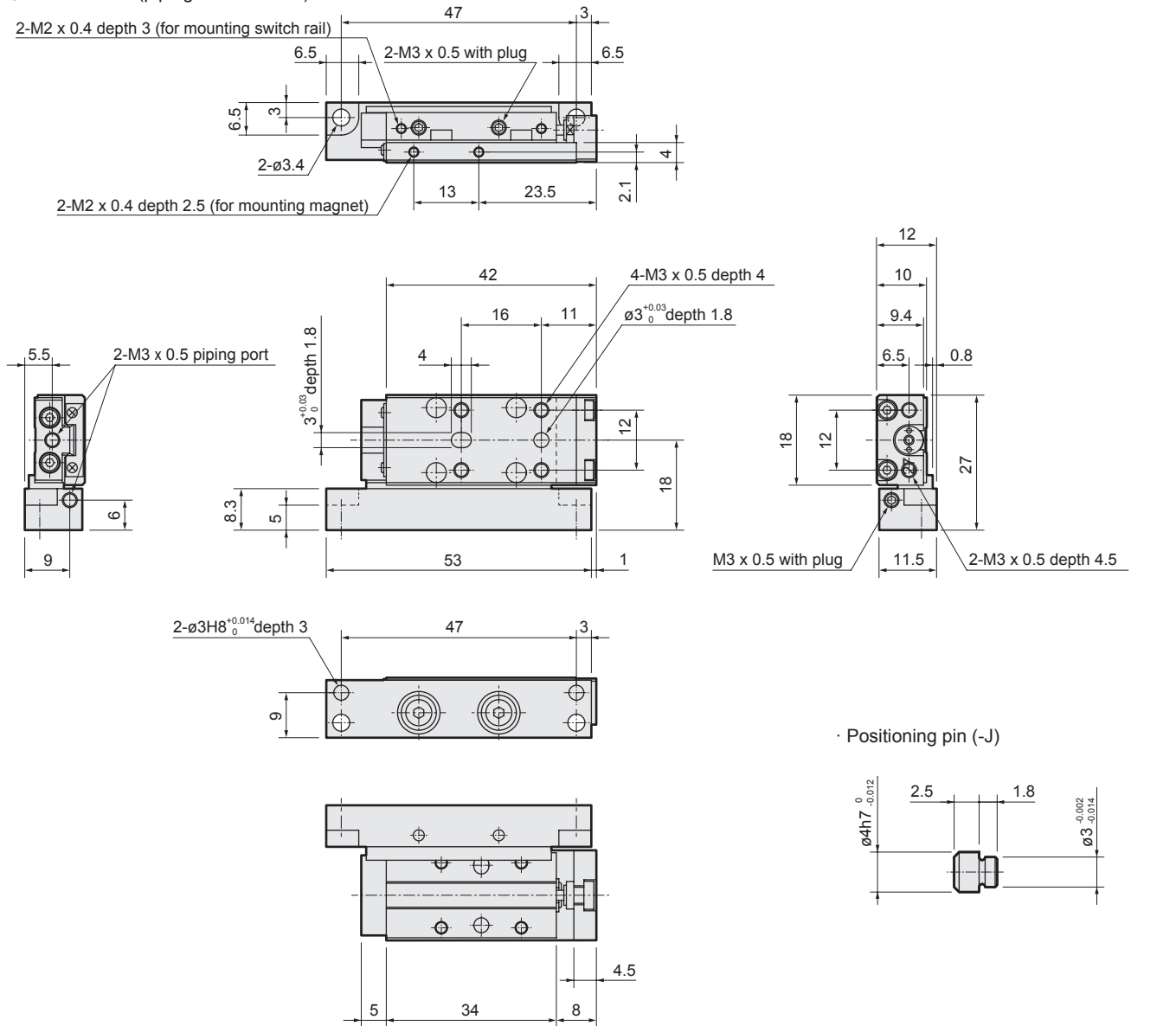


LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
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HRL
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Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

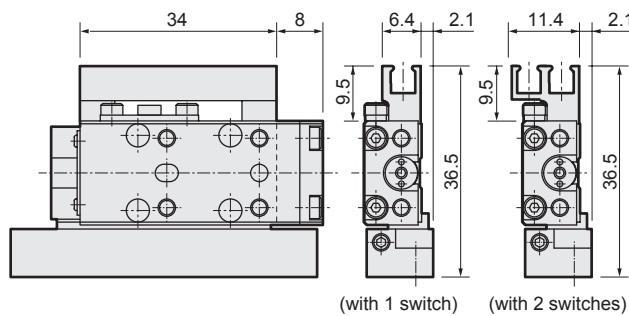
## Dimensions (bore size: $\phi 4.5$ )



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

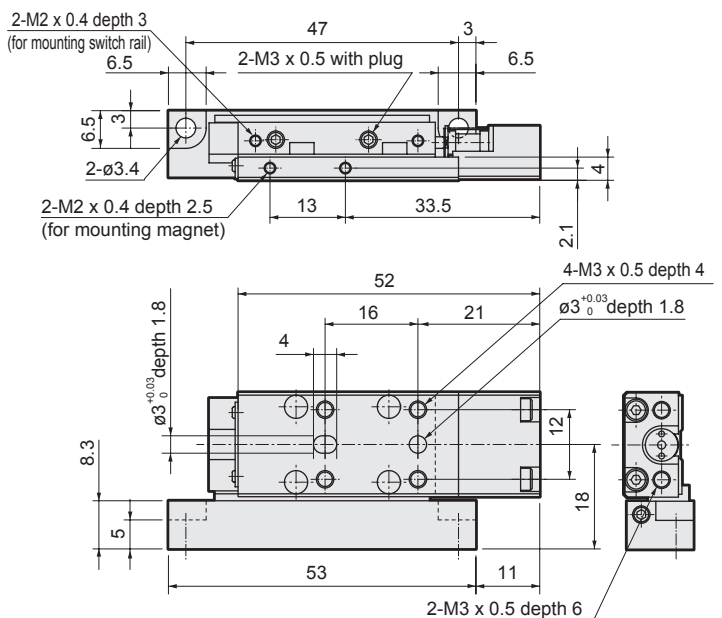


### · With magnet/cylinder switch



Note : Refer to page 47 for switch mounting position dimensions.

### · With buffer (-B)

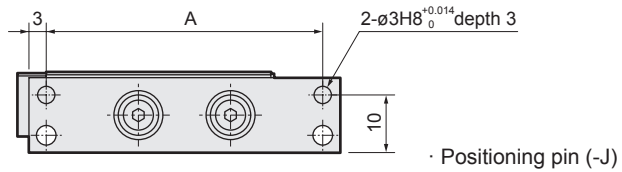
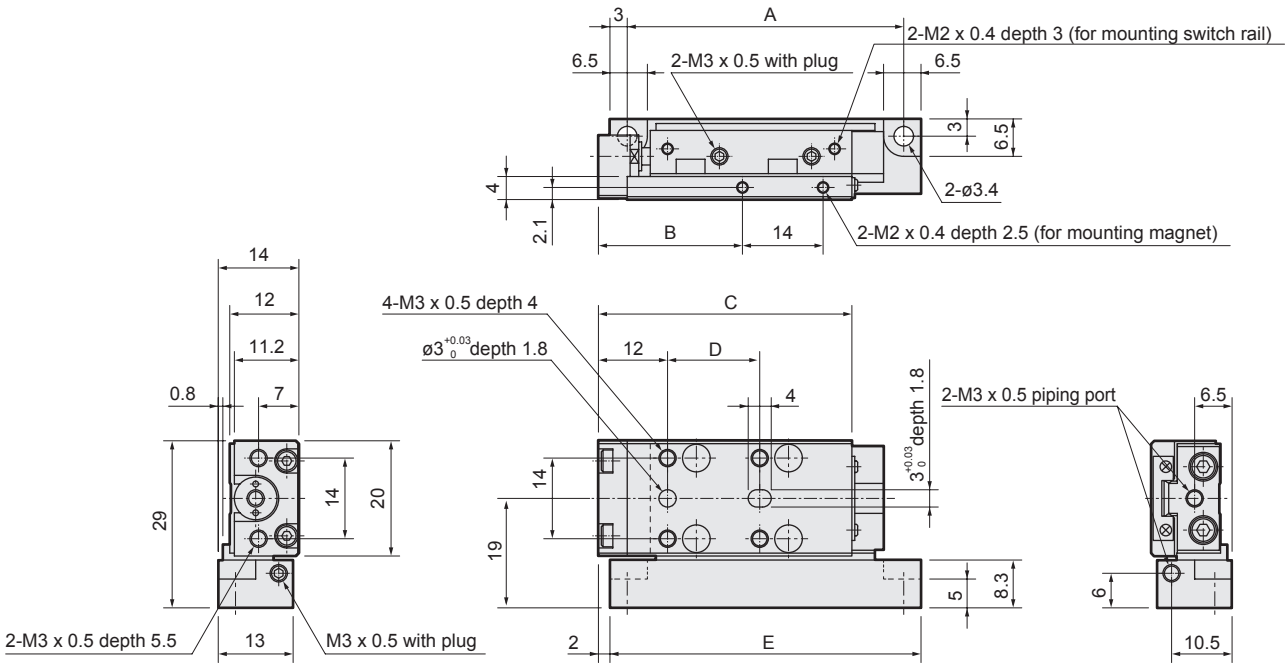


LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
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HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



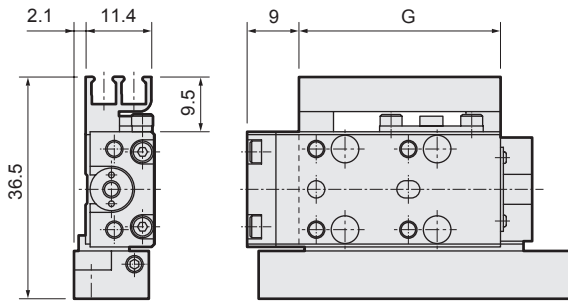
## Dimensions (bore size: $\phi 6$ )

● LCM-A-6-R (piping direction: right)



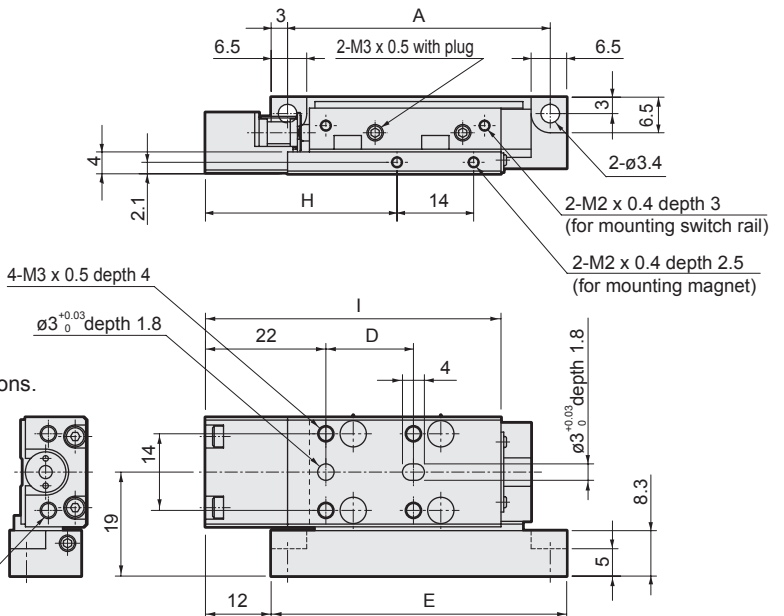
Stroke	A	B	C	D	E	F	G	H	I
5	48	25	44	16	54	35	35	35	54
10	48	25	44	16	54	35	35	35	54
15	53	30	49	21	59	40	40	40	59
20	58	35	54	26	64	45	45	45	64
30	68	45	64	36	74	55	55	55	74

· With magnet/cylinder switch



Note : Refer to page 47 for switch mounting position dimensions.

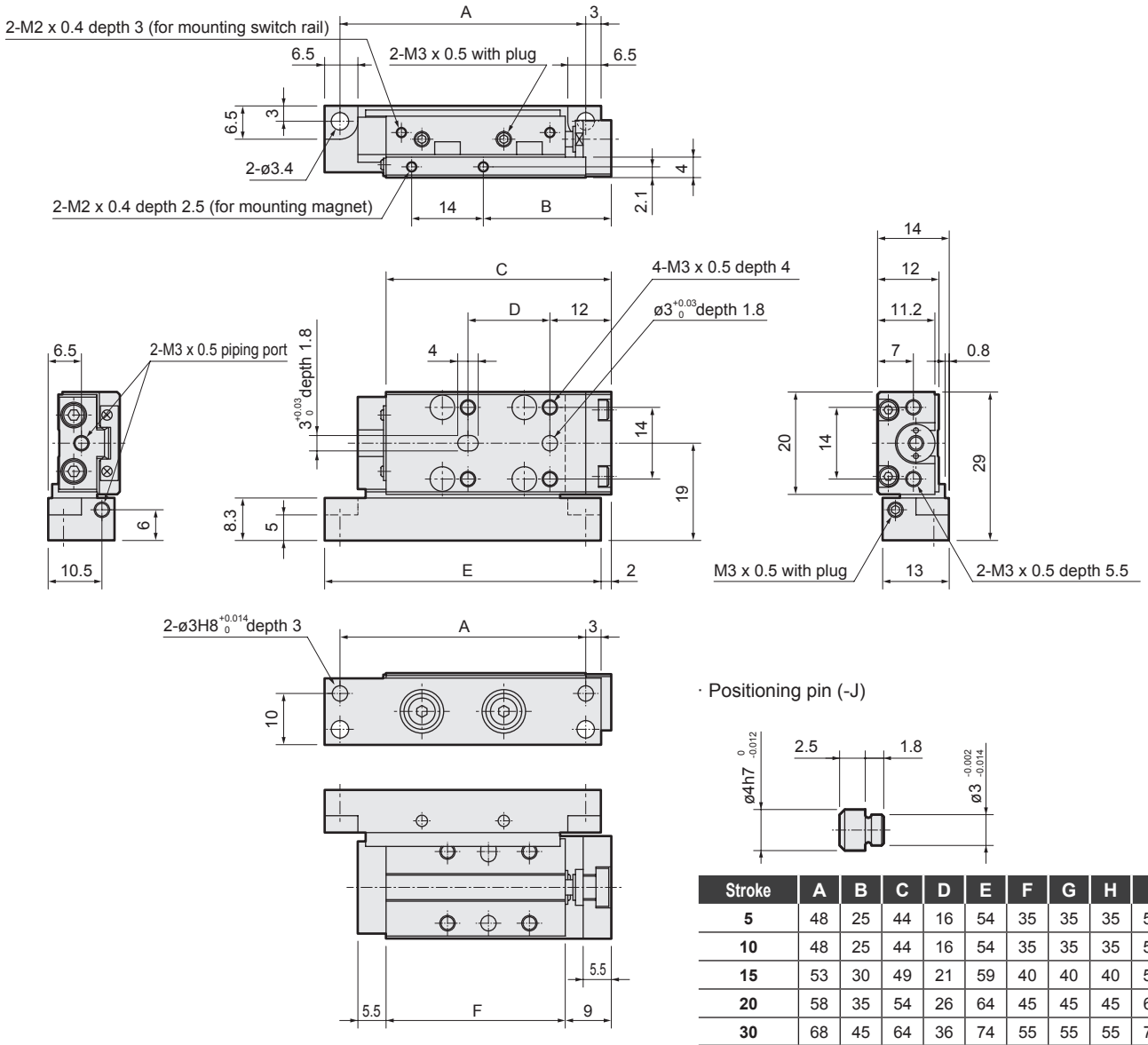
· With buffer (-B)



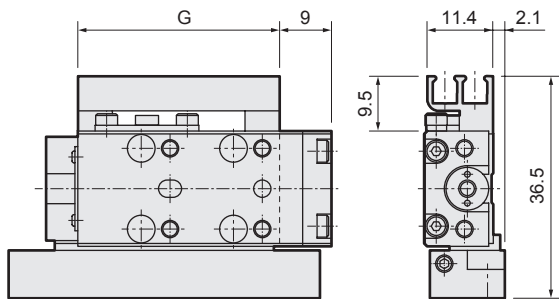
## Dimensions (bore size: $\phi 6$ )



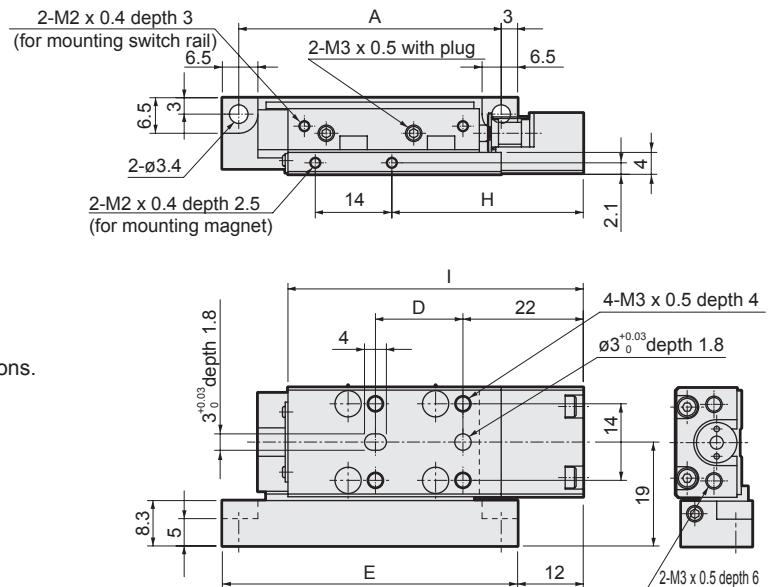
### ● LCM-A-6-L (piping direction: left)



### · With magnet/cylinder switch



### · With buffer (-B)



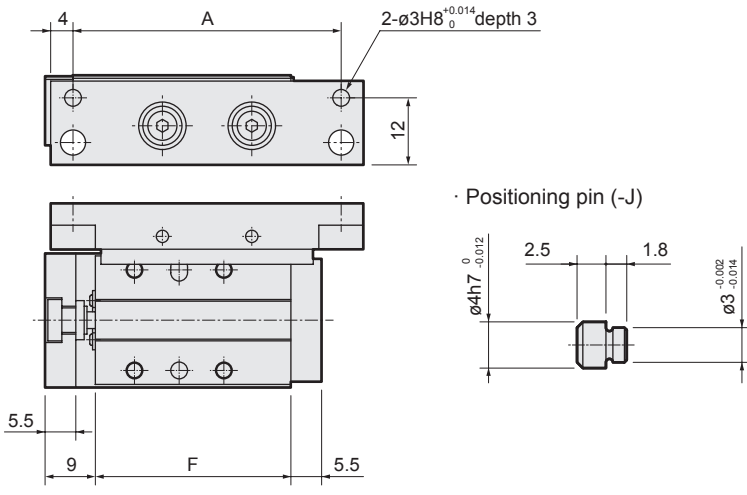
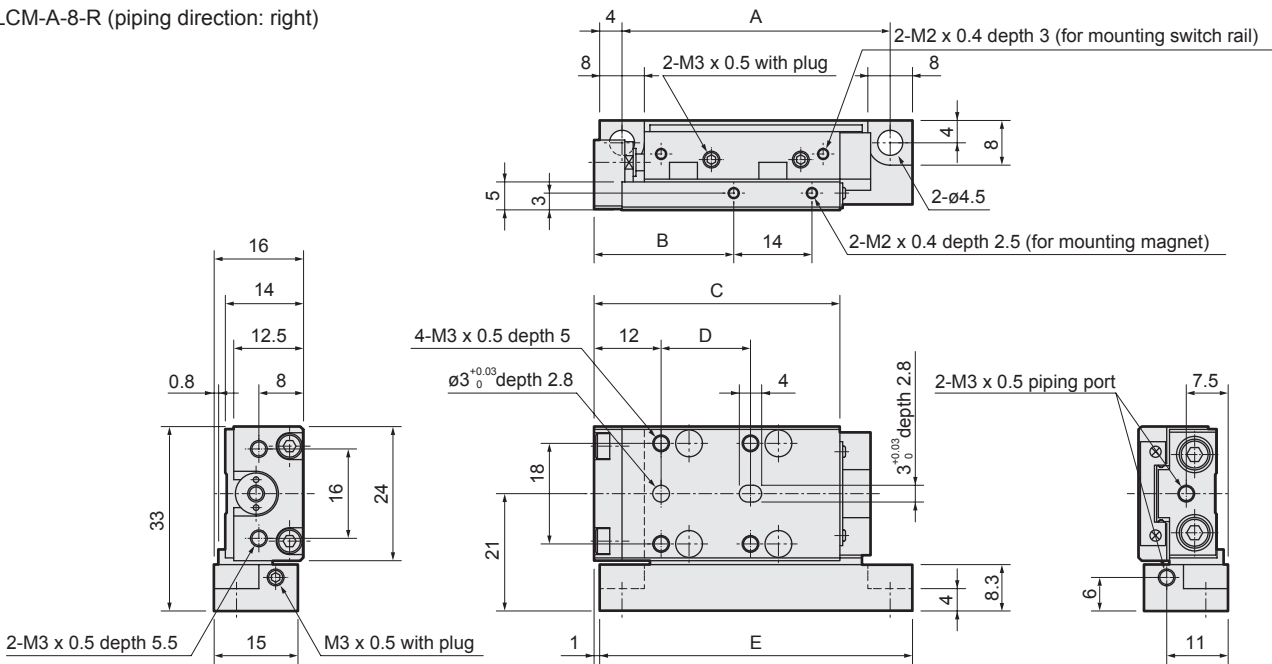
Note : Refer to page 47 for switch mounting position dimensions.

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



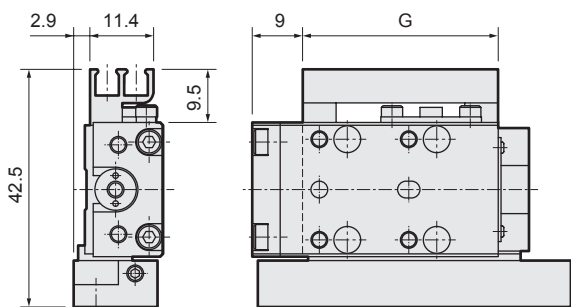
## Dimensions (bore size: $\varnothing 8$ )

● LCM-A-8-R (piping direction: right)



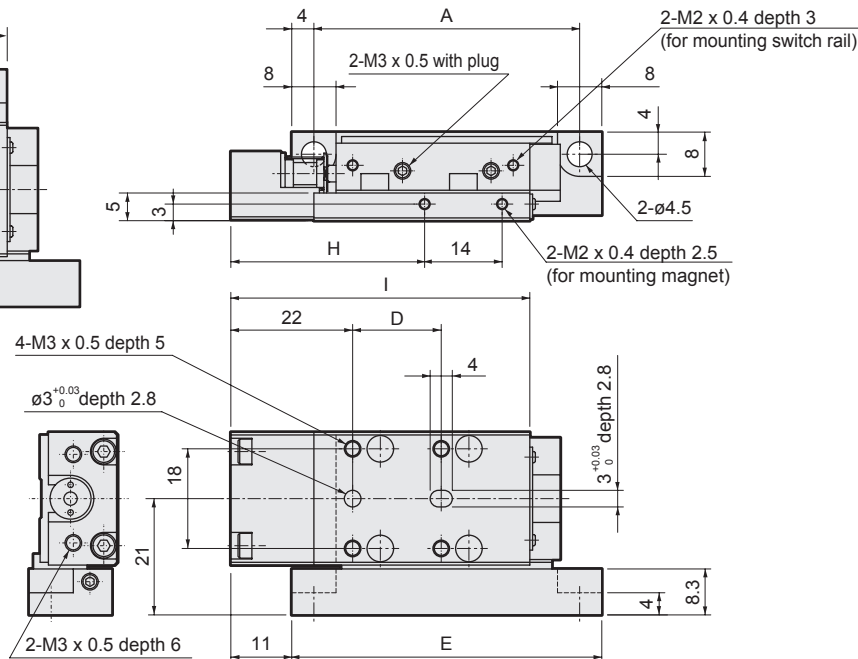
Stroke	A	B	C	D	E	F	G	H	I
5	48	25	44	16	56	35	35	35	54
10	48	25	44	16	56	35	35	35	54
15	58	35	54	26	66	45	45	45	64
20	58	35	54	26	66	45	45	45	64
30	68	45	64	36	76	55	55	55	74

· With magnet/cylinder switch



Note: Refer to page 47 for switch mounting position dimensions.

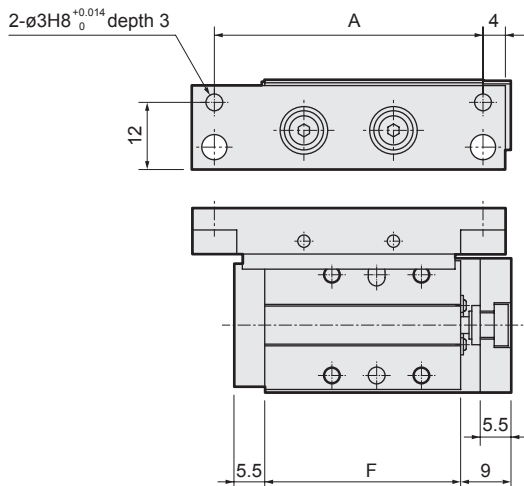
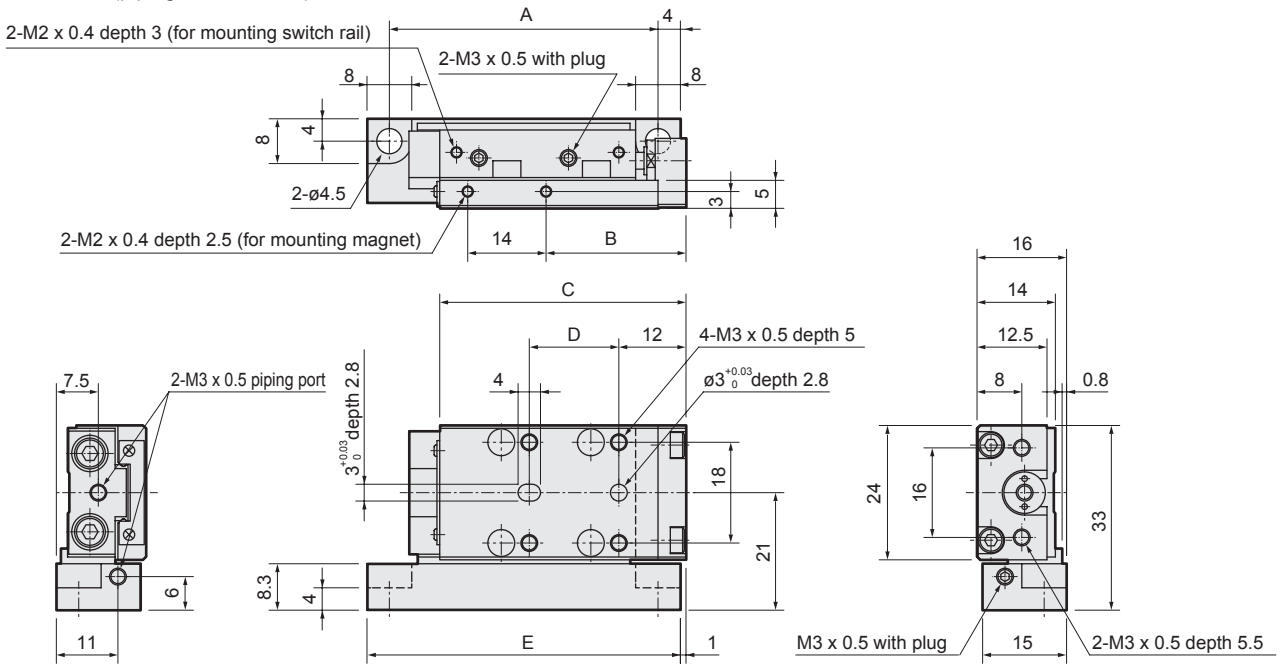
· With buffer (-B)



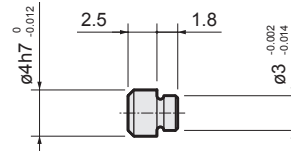
## Dimensions (bore size: $\varnothing 8$ )



### ● LCM-A-8-L (piping direction: left)

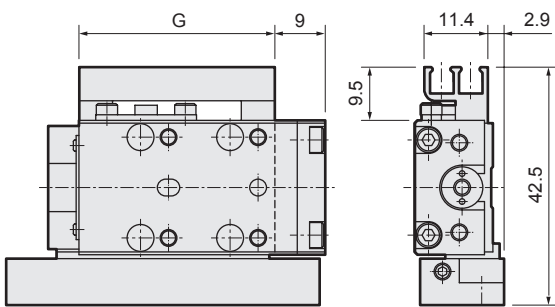


### · Positioning pin (-J)

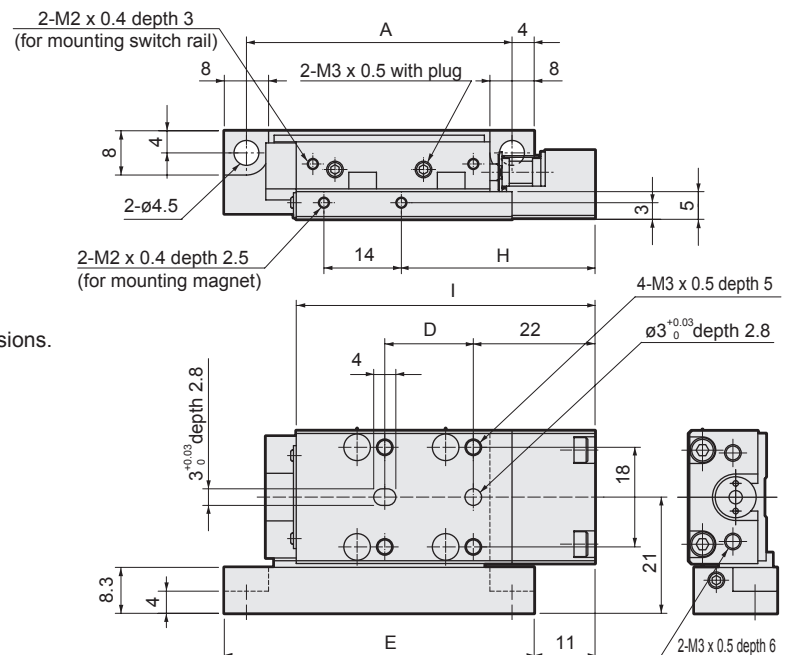


Stroke	A	B	C	D	E	F	G	H	I
5	48	25	44	16	56	35	35	35	54
10	48	25	44	16	56	35	35	35	54
15	58	35	54	26	66	45	45	45	64
20	58	35	54	26	66	45	45	45	64
30	68	45	64	36	76	55	55	55	74

### · With magnet/cylinder switch



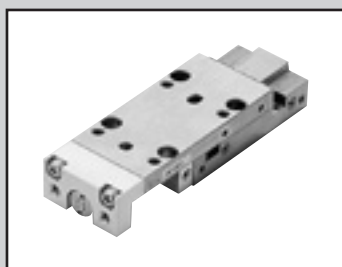
### · With buffer (-B)



Note : Refer to page 47 for switch mounting position dimensions.

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechMod/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCM  
LCR  
LCG  
LCW  
LCX  
STM  
STG  
STS/STL  
STR2  
UCA2  
ULK\*  
JSK/M2  
JSG  
JSC3/JSC4  
USSD  
UFCD  
USC  
UB  
JSB3  
LMB  
LML  
HCM  
HCA  
LBC  
CAC4  
UCAC2  
CAC-N  
UCAC-N  
RCS2  
RCC2  
PCC  
SHC  
MCP  
GLC  
MFC  
BBS  
RRC  
GRC  
RV3\*  
NHS  
HRL  
LN  
Hand  
Chuk  
MecHnd/Chuk  
ShkAbs  
FJ  
FK  
SpdContr  
Ending



Linear slide cylinder Double acting/single rod clean-room specifications

# LCM-P73 Series

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



## Specifications

Descriptions		LCM -P73		
Bore size	mm	$\varnothing 4.5$	$\varnothing 6$	$\varnothing 8$
Actuation		Double acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7		
Min. working 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 0		
Working piston speed	mm/s	30 to 300		
Cushion		No	With rubber cushion	
Lubrication		Not available		
Allowable absorbed energy	J	Refer to the table on page 50.		

## Stroke

Bore size(mm)	Standard stroke(mm)	Min. stroke with switch(mm)
$\varnothing 4.5$	5/10	5
$\varnothing 6$	5/10/15/20/30	
$\varnothing 8$	5/10/15/20/30	

\*1: Products with stroke other than standard stroke are not available.

## Switch specifications

Descriptions	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (Made to order)	F3YH/F3YV
Applications	Dedicated for programmable controller	Programmable For controller, relay	Programmable Controller dedicated		For programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC $\pm 10\%$	30 VDC or less		
Load current	5 to 20mA	50 mA or less	5 to 20mA (*3)		50 mA or less		
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 $\mu$ A or less	1 mA or less		10 $\mu$ A or less		
Weight	g		1 m: 10 3 m: 29				

\*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.

\*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.

\*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C.  
(5 to 10 mA at 60°C)

\*4 : The F-switch uses a bend-resistant lead wire.

### Cylinder weight

Unit: g

Stroke (mm)	5		10		15		20		30		Added weight
	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	No magnet/ switch rail	With magnet + switch rail	
ø4.5	45	49	45	49	-	-	-	-	-	-	Refer to the weight in the switch specifications.
ø6	61	66	61	66	69	75	77	83	93	100	
ø8	87	92	87	92	108	114	108	114	129	136	

### 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
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

- LCM
- LCR
- LCG
- LCW
- LCX
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK\*
- JSK/M2
- JSG
- JSC3/JSC4
- USFD
- UFCD
- USC
- UB
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCS2
- RCC2
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3\*
- NHS
- HRL
- LN
- Hand
- Chuk
- MechHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending



# LCM-P73 Series

LCM
LCR
LCC
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

## How to order

● Without switch (without magnet for switch)

**LCM - 6 - 10 - R** ————— **J2 P73**

● With switch (built-in magnet for switch)

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

**A** Bore size

**B** Stroke

**C** Piping direction

**D** Switch model No.

**E** Switch quantity

**F** Option

**G** Clean-room specifications

Code	Description					
<b>A Bore size (mm)</b>						
4.5	ø4.5					
6	ø6					
8	ø8					
<b>B Stroke (mm)</b>						
		Bore size				
		ø4.5	ø6	ø8		
5	5					
10	10					
15	15	-				
20	20	-				
30	30	-				
<b>C Piping direction</b>						
R	Right from rod side					
L	Left from rod side					
<b>D Switch model No.</b>						
Straight lead wire	L-shaped lead wire	Contact	Voltage		Indicator	Lead wire
			AC	DC		
-	F2S*	Proximity			1-color LED	2-wire
F2H*	F2V*					
-	F3S*				1 color display (PNP output) (made to order)	3-wire
F3H*	F3V*					
F3PH*	F3PV*				2-color LED	3-wire
F2YH*	F2YV*					
F3YH*	F3YV*				3-wire	
<b>* Lead wire length</b>						
Blank	1 m (standard)					
3	3 m (option)					
<b>E Switch quantity</b>						
R	1 on rod side					
H	1 on head side					
D	2					
<b>F Option</b>						
M *1	With magnet					
F1 *1, 2	With magnet + switch rail (one switch groove)					
F2 *1	With magnet + switch rail (two switch grooves)					
J*	With positioning pin (*... number of pins)					
<b>G Clean-room specifications</b>						
P73	Vacuum treatment					

## ⚠ Precautions for model No. selection

\*1: Can be omitted if the switch model No. is specified.

\*2: Available only for ø4.5.

[Example of model No.]

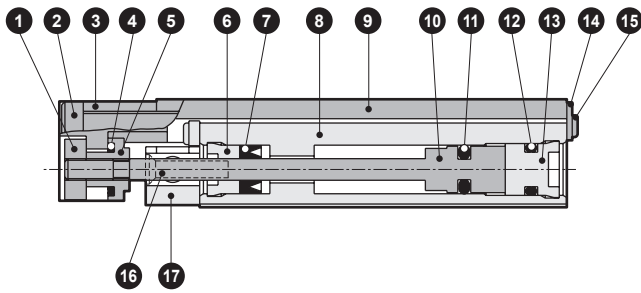
**LCM-6-10-R-F2H-R-J2P73**

Model No.: Linear slide cylinder, double acting

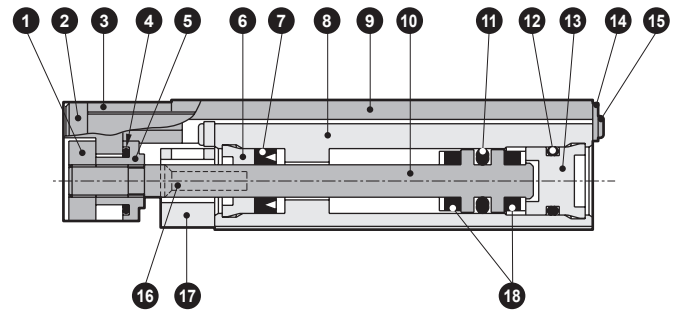
- A** Bore size : ø6 mm
- B** Stroke : 10 mm
- C** Piping direction : Right when viewed from rod side
- D** Switch model No. : Proximity switch F2H, lead wire 1 m
- E** Switch quantity : 1 on rod side
- F** Option : With positioning pin (2)
- G** Clean-room specifications : Vacuum treatment

## Internal structure and parts list

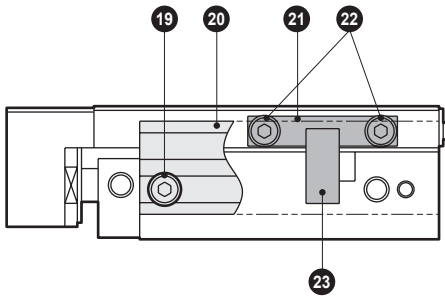
### ● LCM-4.5-P73



### ● LCM-6,8-P73



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



### Positioning pin



**Cannot be disassembled**

## Parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Floating bush A	Stainless steel		13	Cover	Acetal resin	
2	Hexagon socket head cap screw	Stainless steel		14	Stop plate	Stainless steel	
3	End plate	Aluminum alloy		15	Small machine screw	Stainless steel	
4	O-ring	Nitrile rubber		16	Small machine screw	Stainless steel	
5	Floating bush B	Stainless steel		17	Dust collection block	Aluminum alloy	
6	Rod cover	Acetal resin		18	Cushion rubber	Urethane rubber (ø6, ø8)	
7	Rod packing	Nitrile rubber		19	Hexagon socket head cap screw	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 screw	Stainless steel	
11	Piston packing	Nitrile rubber		23	Magnet	Plastic	
12	O-ring	Nitrile rubber		24	Positioning pin	Steel	

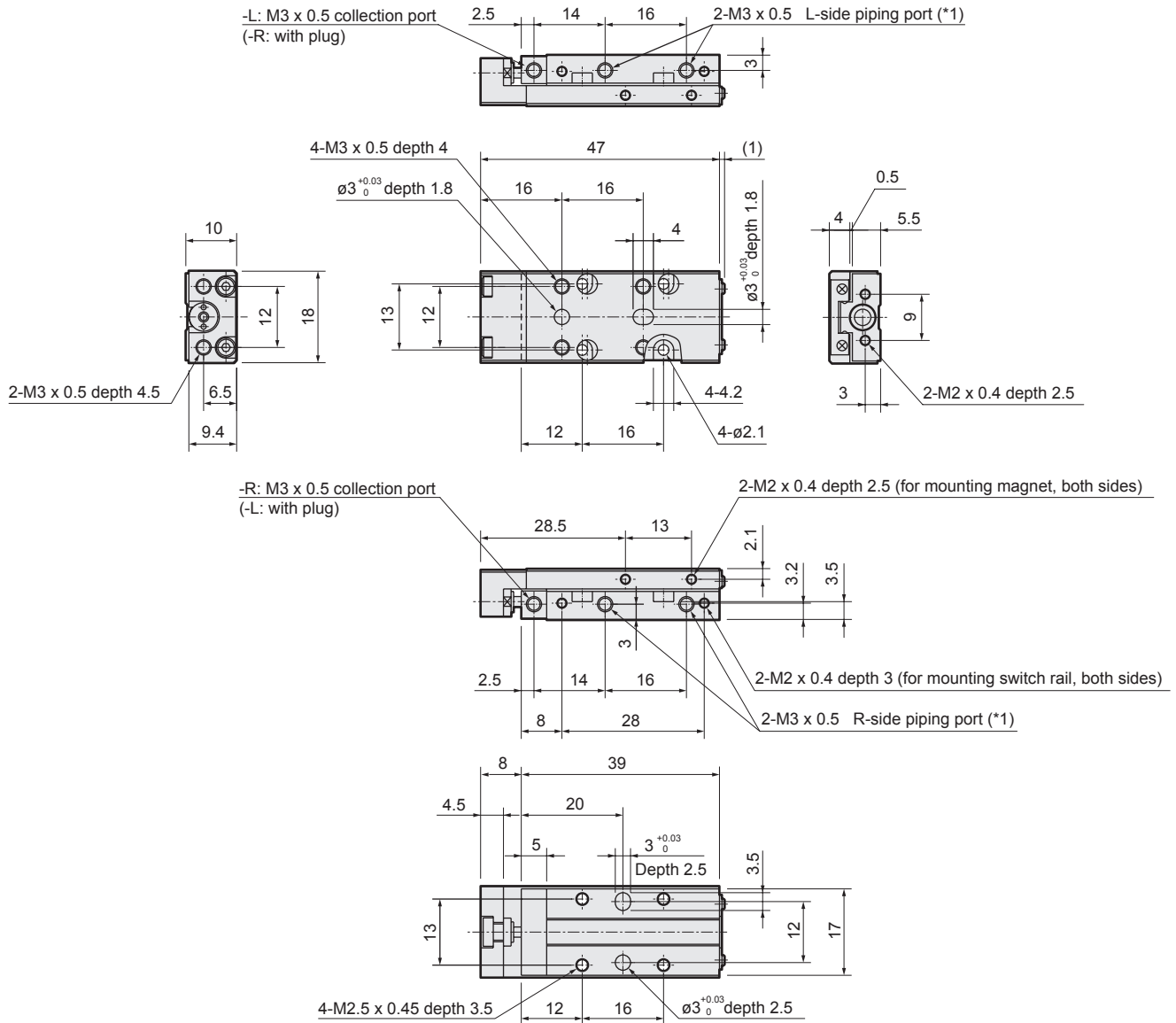
- LCM
- LCR
- LCG
- LCW
- LCX
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK\*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- UB
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCS2
- RCC2
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3\*
- NHS
- HRL
- LN
- Hand
- Chuk
- MechHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending

# LCM-P73 Series



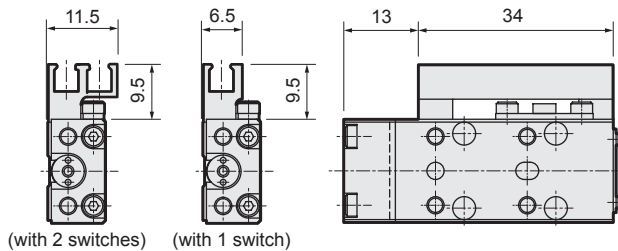
## Dimensions (bore size: $\varnothing 4.5$ )

### ● LCM-4.5-P73

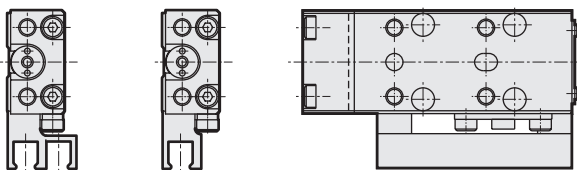


(\*1) Plug is attached to the opposite side to the piping port specified with the model No.

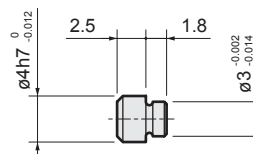
· With magnet/cylinder switch (piping direction: -R)



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



· Positioning pin (-J)



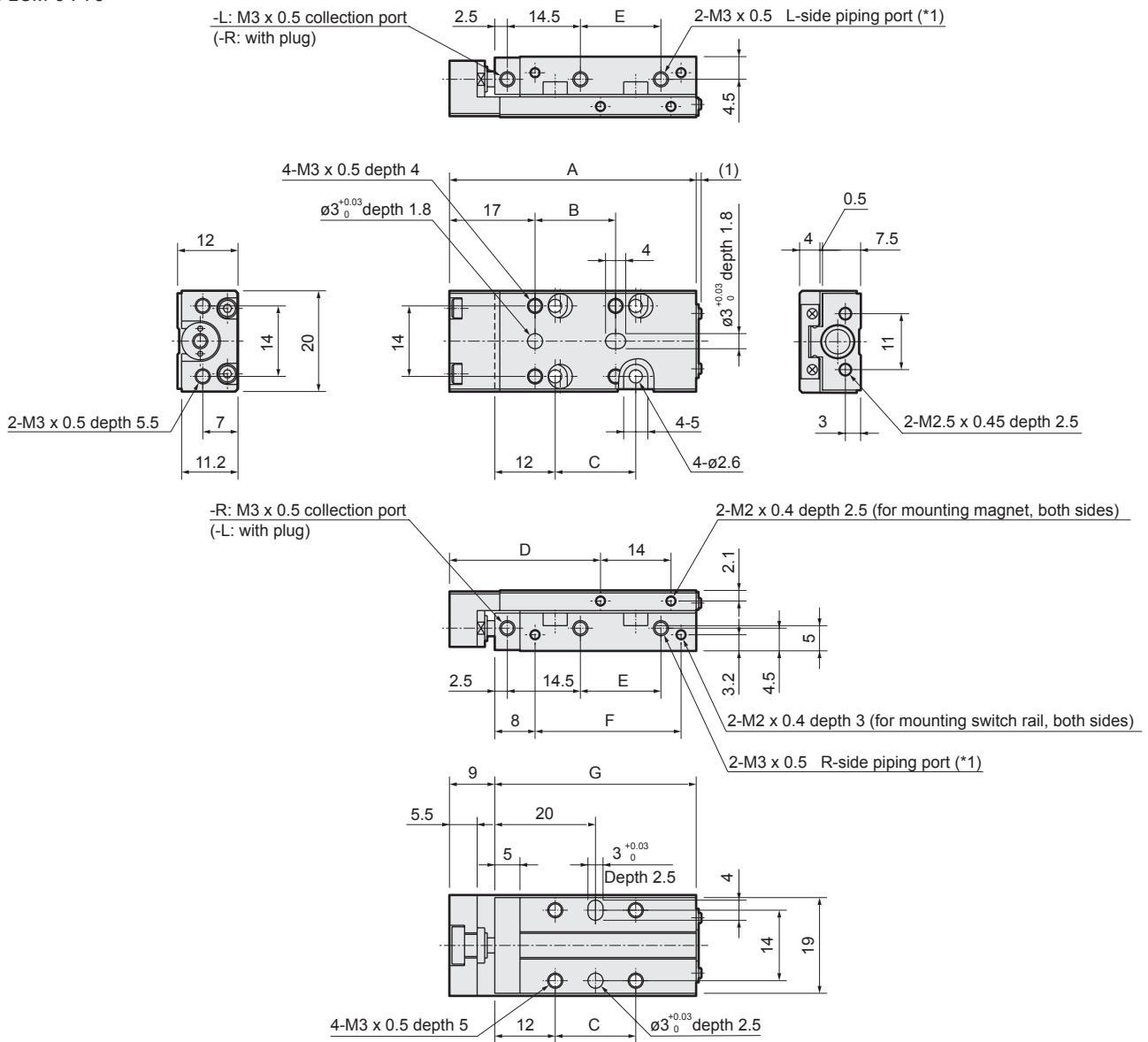
Note : Refer to page 47 for switch mounting position dimensions.

## Dimensions (bore size: $\phi 6$ )

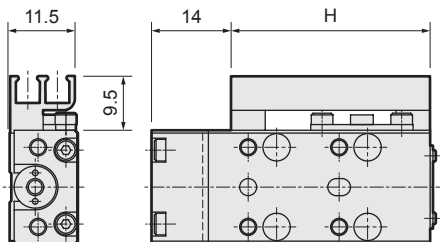


### ● LCM-6-P73

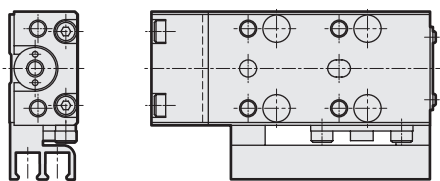
LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



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

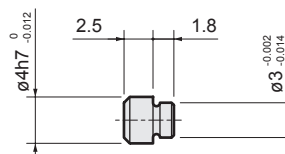


· With magnet/cylinder switch (piping direction: -L)



(\*1) Plug is attached to the opposite side to the piping port specified with the model No.

· Positioning pin (-J)



Stroke	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
20	59	26	26	40	26	39	50	45
30	69	36	36	50	36	49	60	55

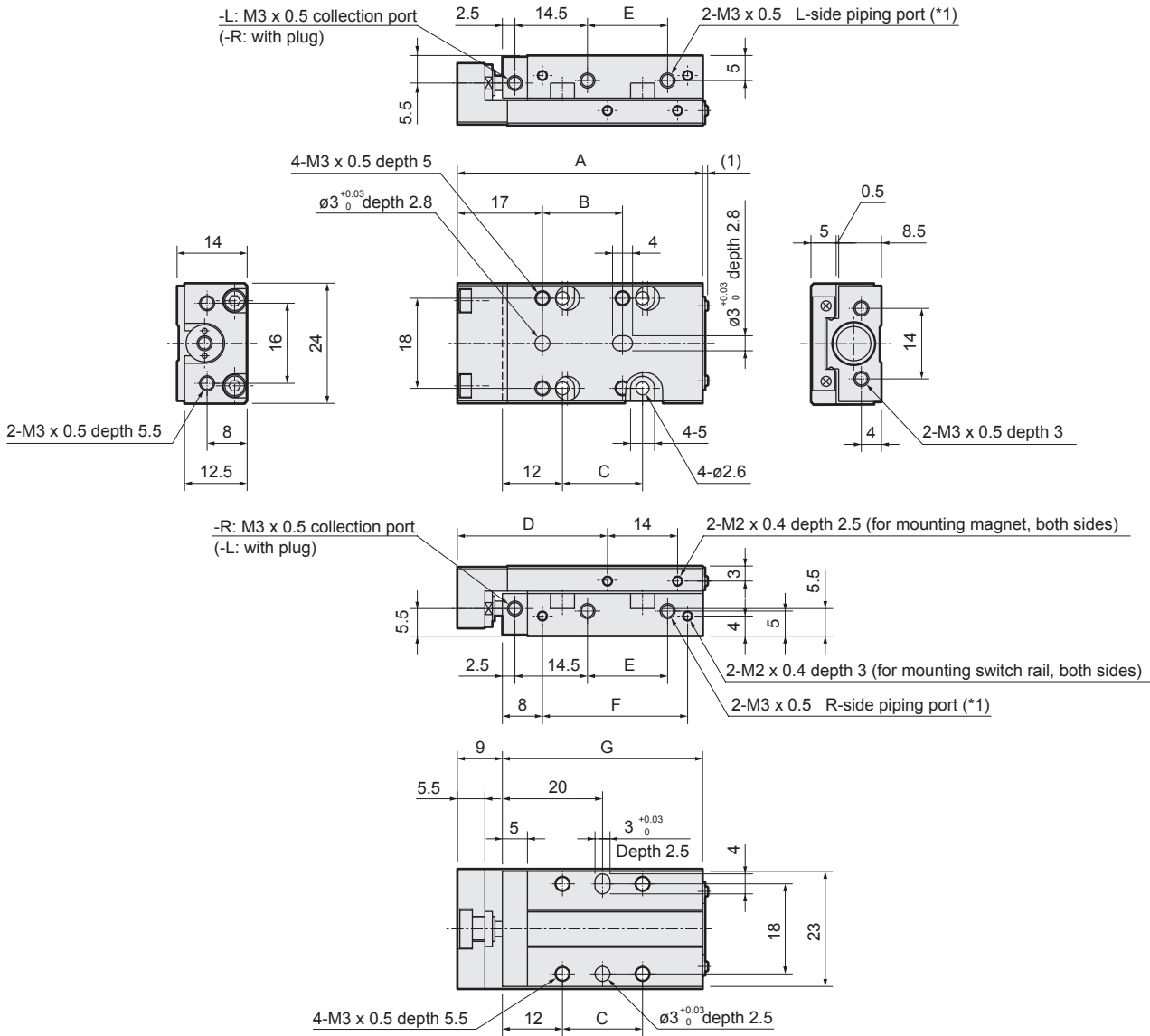
Note : Refer to page 47 for switch mounting position dimensions.

# LCM-P73 Series



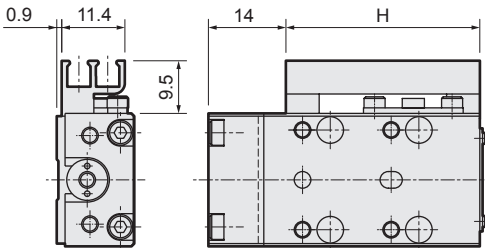
## Dimensions (bore size: $\varnothing 8$ )

### ● LCM-8-P73

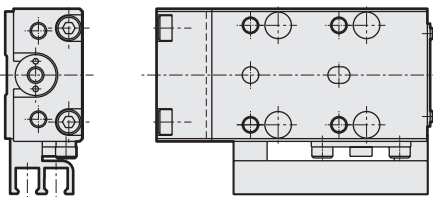


(\*1) Plug is attached to the opposite side to the piping port specified with the model No.

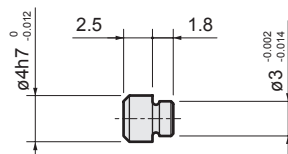
· With magnet/cylinder switch (piping direction: -R)



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



· Positioning pin (-J)



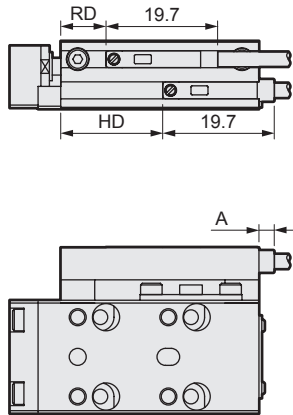
Stroke	A	B	C	D	E	F	G	H
5	49	16	16	30	16	29	40	35
10	49	16	16	30	16	29	40	35
15	59	26	26	40	26	39	50	45
20	59	26	26	40	26	39	50	45
30	69	36	36	50	36	49	60	55

Note : Refer to page 47 for switch mounting position dimensions.

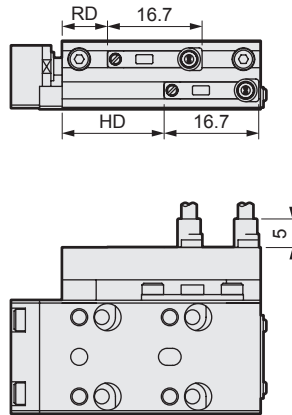
### LCM Series Common protruding dimensions with switch

● Lead wire hole on the rear side

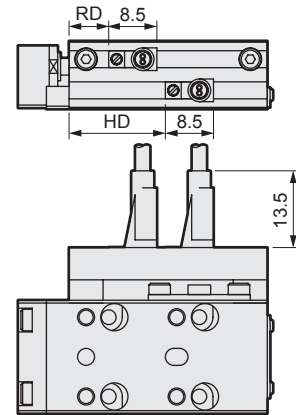
·F\*H



·F\*V



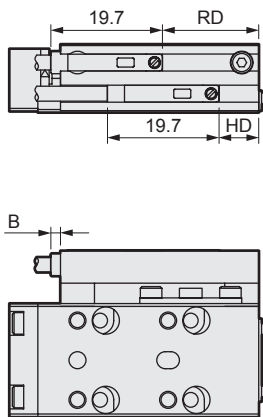
·F\*S



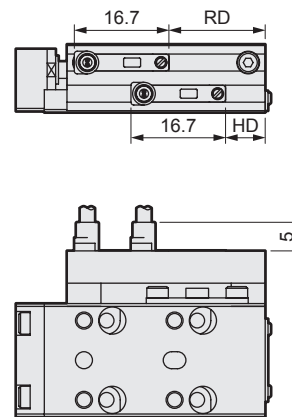
Bore size (mm)	Stroke	RD			HD			A	
		F*H	F*V	F*S	F*H	F*V	F*S	1-color LED	2-color LED
ø4.5	5	12	12	11	17	17	16	2.7	7.2
	10	7	7	6	17	17	16		
ø6	5	13	13	12	18	18	17		
	10	8	8	7	18	18	17		
	15	8	8	7	23	23	22		
	20	8	8	7	28	28	27		
ø8	30	8	8	7	38	38	37		
	5	13	13	12	18	18	17		
	10	8	8	7	18	18	17		
	15	13	13	12	28	28	27		
ø8	20	8	8	7	28	28	27		
	30	8	8	7	38	38	37		

● Lead wire hole on the front side

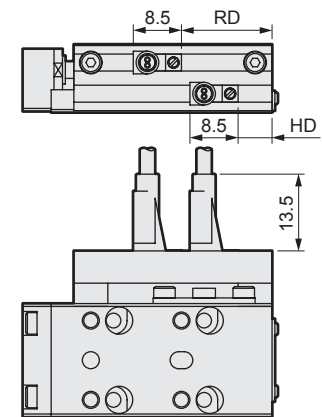
·F\*H



·F\*V



·F\*S



Bore size (mm)	Stroke	RD			HD			B	
		F*H	F*V	F*S	F*H	F*V	F*S	1-color LED	2-color LED
ø4.5	5	12	12	11	7	7	6	-	-
	10	17	17	16				1.7	6.2
ø6	5	12	12	11	7	7	6	-	-
	10	17	17	16				1.7	6.2
	15	22	22	21				1.7	6.2
	20	28	27	26				1.7	6.2
ø8	30	37	37	36	7	7	6	1.7	6.2
	5	12	12	11				-	-
	10	17	17	16				1.7	6.2
	15	22	22	21				-	-
ø8	20	27	27	26				1.7	6.2
	30	37	37	36				1.7	6.2

- LCM
- LCR
- LCG
- LCW
- LCX
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK\*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- UB
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCS2
- RCC2
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3\*
- NHS
- HRL
- LN
- Hand
- Chuk
- MechHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending