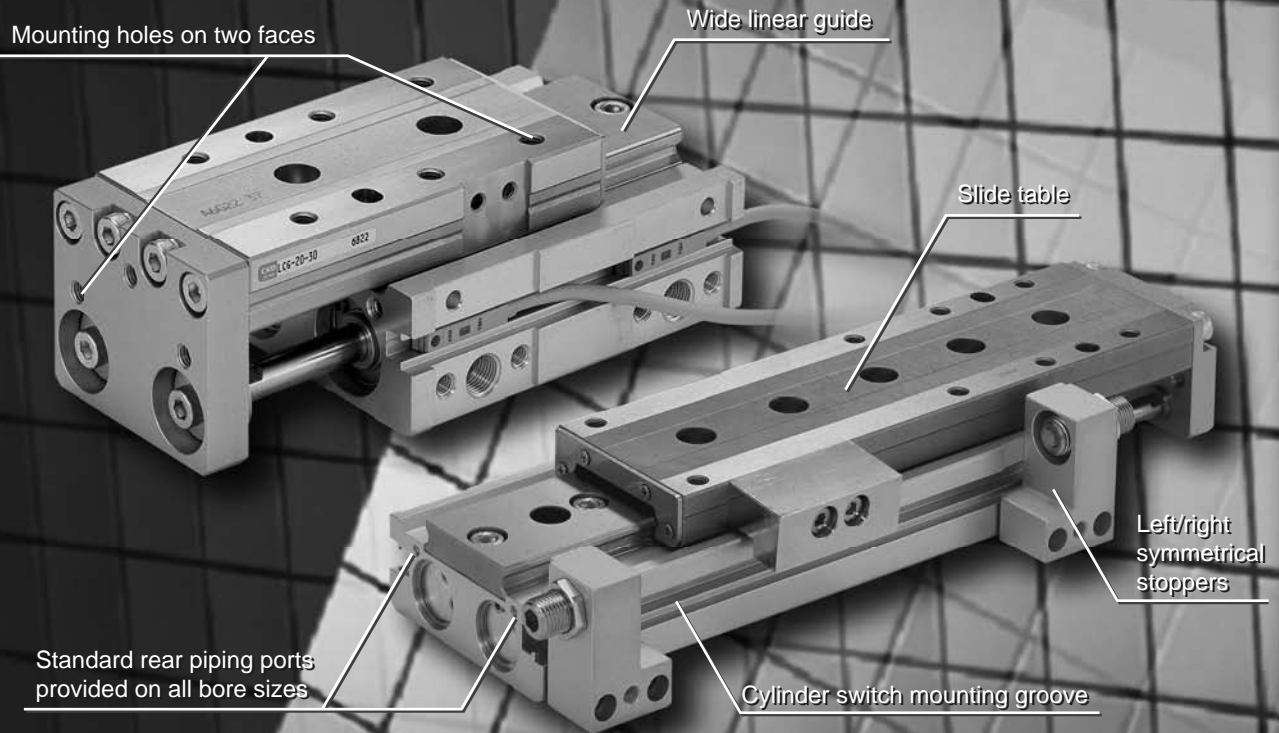


High accuracy, rigidity and easier use.



Higher accuracy

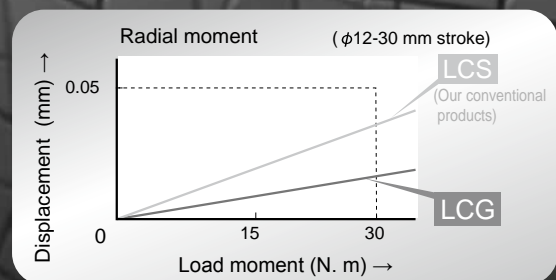
The linear guide's table face is used as the slide table, thus realizing a higher accuracy compared to conventional products.
 Parallelism 0.03mm ($\phi 12-30$ mm stroke)
 End plate perpendicularity 0.05mm

Easier use

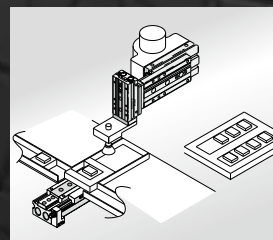
Hassles for designing the cylinder and linear slide separately have been eliminated, thus reducing the design man-hours. The freedom of design and ease-of-use have been enhanced with left/right symmetrical mounting of stoppers and multi-face piping, etc.

Higher rigidity

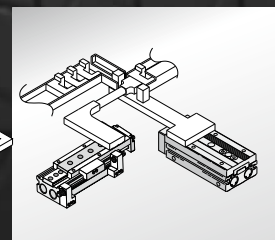
The slide table material has been changed from the conventional aluminum material to stainless steel or steel. A higher rigidity is achieved when used in combination with the wide guide.



Applications



Small parts stored on the tray or supplied from the tray



Feed of small parts supplied from the tray

LCG Series

Linear slide cylinder

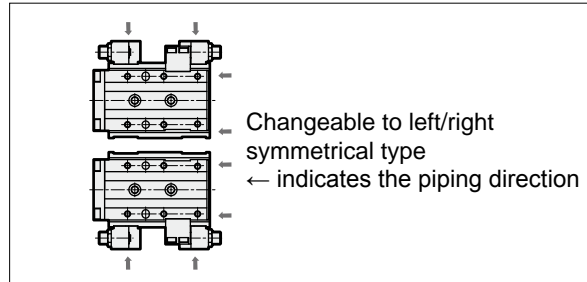
- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG**
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC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

A wide guide, featuring high accuracy and high rigidity, has been mounted on the air cylinder. The linear guide table face is used as the slide table, thus realizing ease-of-use with an unprecedented accuracy and rigidity. Linear slide cylinder LCG Series. ($\phi 6$, $\phi 8$, $\phi 12$, $\phi 16$, $\phi 20$, $\phi 25$)

High freedom of design

This product's freedom of design is particularly high with the left/right symmetrical stopper, multi-face piping, two-face mounting and positioning hole, etc.

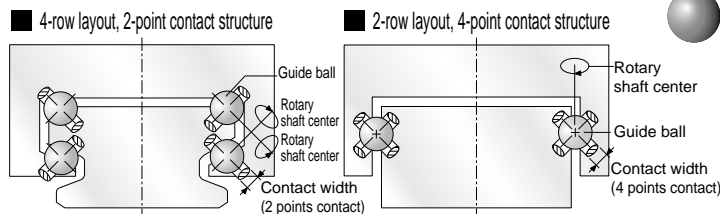
■ Changeable to left/right symmetrical type



Linear guide with four rows of guide balls (Excluding $\phi 6$, 8)

The guide balls are arranged in four rows to enable stable operation in all load directions.

The guide ball contact width is small compared to the two-row layout guide, so the frictional resistance when turning can be reduced. This structure enables smooth movement and enhances accuracy and rigidity.



LCG Series products

Series variation	Bore size	Stroke length (mm)								
		10	20	30	40	50	75	100	125	150
Double acting single rod type LCG	$\phi 6$									
	$\phi 8$									
	$\phi 12$									
	$\phi 16$									
	$\phi 20$									
Double acting position locking type LCG-Q	$\phi 25$									
	$\phi 8$									
	$\phi 12$									
	$\phi 16$									
	$\phi 20$									
Double acting single rod type (Clean room specifications) LCG-P7*	$\phi 25$									
	$\phi 6$									
	$\phi 8$									
	$\phi 12$									
	$\phi 16$									
	$\phi 20$									
	$\phi 25$									

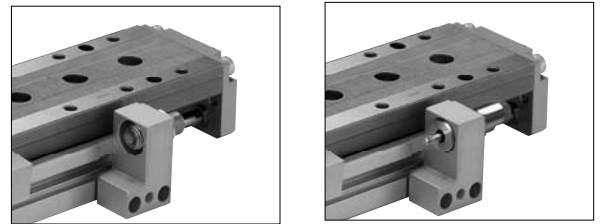
* Rust proof treated parts are available as custom orders. Refer to page 1759 for details.

Wide option and variation

The standard type, position locking type and clean specification type models are available.

Options include a stroke adjustment stopper and shock absorption type stopper, etc.

* The shock absorber type stopper cannot be selected for the clean specifications.



■ Stopper for adjustable stroke
Single-side adjustment
range 0 to 5mm

■ Shock absorber type stopper
Shock is absorbed at stroke end

2-color switch

The 2-color indicator switch can be selected.

This switch provides a flush design without no protrusions.

RoHS directive complied


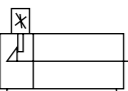

All substances that can adversely affect the environment, including lead and hexavalent chrome, have been eliminated.

RoHS

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

Linear slide cylinder
Combined functions

● : Standard ○ : Option ■ : Not available

Variation	Model no. JIS symbol	Bore size (mm)	Stroke length (mm)									Option												Switch	Page	
												Stopper for adjustable stroke						Shock absorber type stopper								
												Stopper position ①	Stopper position ②	Stopper position ③	Stopper position ④	Stopper position ①・③	Stopper position ②・④	Stopper position ①	Stopper position ②	Stopper position ③	Stopper position ④	Stopper position ①・③	Stopper position ②・④			
10	20	30	40	50	75	100	125	150	S1	S2	S3	S4	S5	S6	A1	A2	A3	A4	A5	A6						
Double acting single rod type 	LCG	φ 6	●	●	●	●	●	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	○	1706
		φ 8	●	●	●	●	●	●	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	○	
		φ 12	●	●	●	●	●	●	●	●	■	■	■	■	■	■	■	■	■	■	■	■	■	■	○	
		φ 16	●	●	●	●	●	●	●	●	●	●	■	■	■	■	■	■	■	■	■	■	■	■	○	
		φ 20, φ 25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	■	■	■	■	■	■	■	■	○	
Double acting position locking type 	LCG-Q	φ 8	●	●	●	●	●	●	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	○	1728
		φ 12	●	●	●	●	●	●	●	●	■	■	■	■	■	■	■	■	■	■	■	■	■	■	○	
		φ 16	●	●	●	●	●	●	●	●	●	●	●	■	■	■	■	■	■	■	■	■	■	■	○	
		φ 20, φ 25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	■	■	■	■	■	■	■	■	○	
Double acting single rod type clean room specifications 	LCG-P7*	φ 6	●	●	●	●	●	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	○	1736	
		φ 8	●	●	●	●	●	●	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		○
		φ 12	●	●	●	●	●	●	●	●	■	■	■	■	■	■	■	■	■	■	■	■	■	■		○
		φ 16	●	●	●	●	●	●	●	●	●	●	●	■	■	■	■	■	■	■	■	■	■	■		○
		φ 20, φ 25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	■	■	■	■	■	■	■	■		○

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

Linear slide cylinder
Combined functions



Pneumatic components

Safety precautions

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

Linear slide cylinder LCG Series

Design & Selection

1. Common

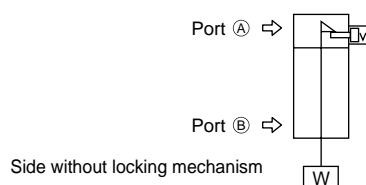
CAUTION

- Select the cylinder based on the "LCG selection guide " on pages 1752 to 1755.
- When using the cylinder where it could be subject to water or oil exposure, where it could corrode, or where high levels of dust are present, the cylinder could be damaged or malfunction. Protect the product with a cover.
- Cautions of type with switch
 - When using the T*V switch with the cylinder with a stopper for adjustable stroke (S3**, S4**, S5**, S6**) or shock absorber stopper (A3**, A4**, A5**, A6**), the head side switch could interfere with the stopper. Install the switch on the side opposite the stopper.
 - When using a switch with a stroke of less than 30, one switch is installed in each of the two grooves on the body. Check the direction of leads in design.
- A powerful magnet placed near this product could magnetize the table and cause the switch to malfunction.

2. Position locking type LCG-Q

WARNING

- If pressure is supplied to port ① in the locked state with neither port pressurized, locks may not be releasable or may be released suddenly, causing the piston rod to pop out, which is extremely dangerous. When releasing the locking mechanism, supply pressure to port ② and check that no load is applied to the locking mechanism.



- If lowering speed is to be increased with the quick exhaust valve, the cylinder may move out faster than the lock pin and prevent the locking pin from being released correctly. Do not use a quick exhaust valve with the cylinder with position locking.
- Do not use a 3-position valve.

Do not use this cylinder combined with 3-position valve, especially that with a closed center metal seal. The lock is not applied if pressure is sealed on the port having the lock. Even if locked once, air leakage from the valve may enter the cylinder then the lock may be released over time.
- If negative pressure is applied to the locking mechanism, the lock may be released. Use the solenoid valve as a discrete unit, or use an independently exhausted manifold.
- Do not use multiple cylinders synchronized.

Do not move more than one workpiece using more than two cylinders with position locking mechanism simultaneously. One of the cylinder's locks may not be released.

CAUTION

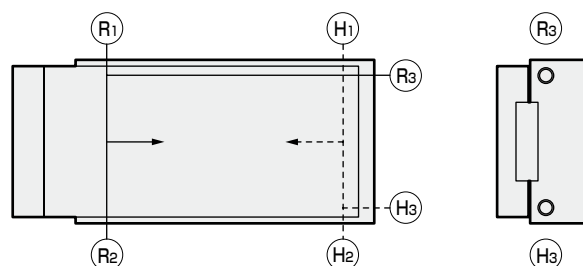
Installation & Adjustment

1. Common; piping

CAUTION

- When changing a piping port position, apply adhesive to M3, M5 plug (hexagon socket head set screw). Use a low-strength adhesive such as LOCTITE 222/221, or ThreeBond 1344.

■ Piping port position and operating direction



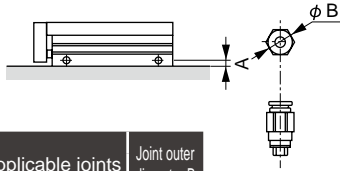
Ⓜ indicates the rod end pressurizing port and Ⓜ indicates the head end pressurizing port. When shipped from the factory, the ports other than Ⓜ and Ⓜ are sealed with plugs. This may be Ⓜ and Ⓜ depending on the stopper position if a stopper is selected.

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

Installation & Adjustment

■ Precautions for piping joint

Install a flow control valve when piping. The applicable joints are shown as below.



Descriptions Bore size (mm)	Port size	Port dimension A	Applicable joints	Joint outer diameter B
φ 6	M3	4	SC3W-M3-4 SC3WU-M3-4 SC3W-M3-3.2 SC3WU-M3-3.2 GWS3-M3-S GWS4-M3-S	φ 8 or less
φ 8	M5	5.5	SC3W-M5-4 SC3WU-M5-6 GWS4-M5-S GWS4-M5	φ 11 or less
φ 12		5.5	SC3W-M5-4 SC3WU-M5-6 GWS4-M5-S GWS4-M5	
φ 16	M5	6.5	SC3W-M5-4 SC3WU-M5-6 GWS4-M5-S GWS4-M5 GWL4-M5 GWL6-M5 GWS6-M5	φ 13 or less
φ 20	Rc1/8	8	SC3W-6-4,6,8 GWS4-6 GWS8-6 GWL6-6	φ 15 or less
φ 25		9	GWS6-6 GWL4-6	

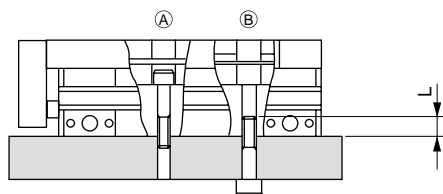
2. Common; installation

⚠ CAUTION

■ Check that no dents or scratches occur on main tubing installation or end plates that may adversely affect flatness. Maintain flatness of the corresponding installed component on the body or table at 0.02 mm or less.

■ Observe the following values for the bolt insertion length and tightening torque when installing this product.

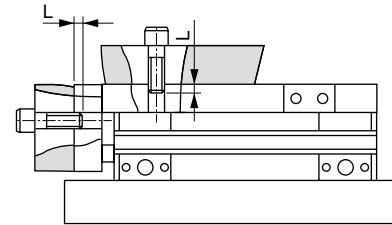
<Fig. 1>



Descriptions	A		B		Max. screw depth L (mm)
	Applicable bolts	Tightening torque (N·m)	Applicable bolts	Tightening torque (N·m)	
LCG-6	M3 x 0.5	0.6 to 1.1	M4 x 0.7	1.4 to 2.4	6
LCG-8	M3 x 0.5	0.6 to 1.1	M4 x 0.7	1.4 to 2.4	6
LCG-12	M4 x 0.7	1.4 to 2.4	M5 x 0.8	2.9 to 5.1	8
LCG-16	M5 x 0.8	2.9 to 5.1	M6 x 1.0	4.8 to 8.6	9
LCG-20	M5 x 0.8	2.9 to 5.1	M6 x 1.0	4.8 to 8.6	9
LCG-25	M6 x 1.0	4.8 to 8.6	M8 x 1.25	12.0 to 21.6	12

■ Observe the following bolt insertion lengths and tightening torque when installing the jig on the slide table or end plate.

<Fig. 2>

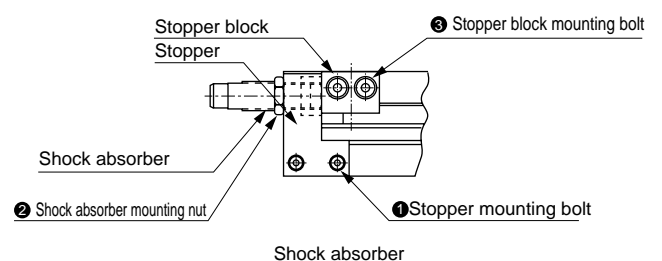
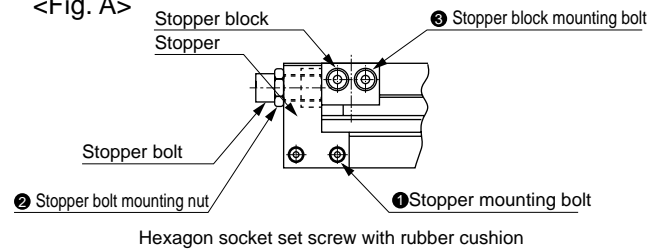


Descriptions	Table		
	Applicable bolts	Tightening torque (N·m)	Max. screw-in length L (mm)
LCG-6	M3 x 0.5	0.6	3
LCG-8	M3 x 0.5	0.6	3
LCG-12	M4 x 0.7	1.4	4
LCG-16	M5 x 0.8	2.9	5
LCG-20	M5 x 0.8	2.9	5
LCG-25	M6 x 1.0	4.8	6

Descriptions	End plate		
	Applicable bolts	Tightening torque (N·m)	Screw-in length L (mm)
LCG-6	M3 x 0.5	0.6	4.5 to 6
LCG-8	M3 x 0.5	0.6	4.5 to 7
LCG-12	M4 x 0.7	1.4	6 to 9
LCG-16	M5 x 0.8	2.9	7.5 to 9
LCG-20	M5 x 0.8	2.9	7.5 to 11
LCG-25	M6 x 1.0	4.8	9 to 11

■ Observe the following values for bolts at the stopper and in nut tightening torque.

<Fig. A>



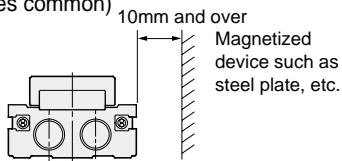
Model	1 Stopper mounting bolt (N·m)	2 Stopper bolt mounting nut (N·m) 2 Shock absorber mounting nut (N·m)	3 Stopper block mounting bolt (N·m)
LCG-6	0.4 to 0.5	1.2 to 2.0	0.6 to 0.8
LCG-8	0.4 to 0.5	1.2 to 2.0	0.6 to 0.8
LCG-12	0.6 to 0.8	1.2 to 2.0	0.6 to 0.8
LCG-16	0.6 to 0.8	3.0 to 4.0	1.4 to 1.8
LCG-20	2.9 to 3.5	4.5 to 6.0	1.4 to 1.8
LCG-25	2.9 to 3.5	4.5 to 6.0	2.9 to 3.5

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

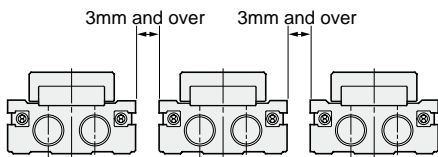
Linear slide cylinder
Combined functions

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

- The cylinder switch could malfunction if there is a magnetic body, such as a steel plate, near the cylinder switch. Separate the magnetic body by at least 10mm or more from the cylinder surface, or change the cylinder switch mounting surface for safe use. (All bore sizes common)



- The cylinder switch may malfunction if cylinders are installed adjacently. Separate cylinders by the following distance. (All bore sizes common)



- The CKD shock absorber is treated as a consumable. Replace the shock absorber if energy absorption performance drops or if movement is no longer smooth.

3. Position locking type LCG-Q

⚠ CAUTION

- The locking mechanism functions at stroke end. If the stopper is applied with the external stopper in the middle of a stroke, the locking mechanism will not function and the load may drop. Before setting the load, check that the locking mechanism functions correctly.
- Supply a pressure higher than the minimum working pressure to the port having the locking mechanism.
- If piping on the side with the lock is thin and long, or if the speed controller is separated from the cylinder port, exhaust speed may slow, taking time for the lock to function. This may also occur if the silencer on the solenoid valve's EXH. port is clogged.

During Use & Maintenance

1. Common

⚠ CAUTION

- Apply AFJ grease (THK) to guide rails once a month or every 1,000,000 operations, whichever is sooner.

- Check for table corrosion.

The table is made of martensitic stainless steel $\phi 6$ to $\phi 16$ or alloy steel $\phi 20$ or $\phi 25$. Use in a hot, humid environment or contact with water due to condensation, etc., could cause rust.

2. Position locking type LCG-Q

⚠ CAUTION

- After manually operating the locking mechanism, return the locking mechanism to the original position. Do not use a manual override except during adjustment, because this may be dangerous.

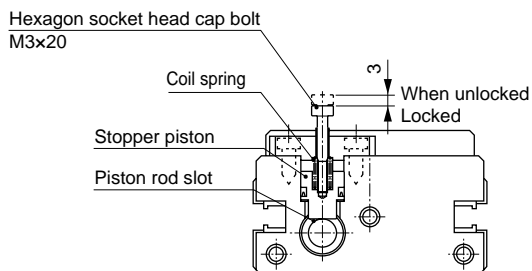
- Release the lock when installing or adjusting the cylinder. The lock could be damaged if the cylinder is installed while the lock is applied.

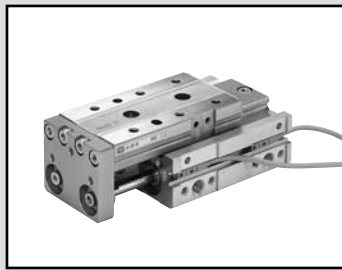
- Use the flow control valve with meter-out control. Locks may not be released during meter-in control.

- Use the side with the lock with the cylinder stroke end. If the cylinder's piston does not reach the stroke end, the lock may not be applied or may not be released.

- How to release

Screw a hexagon socket head bolt (M3 × 20) into the stopper piston, and pull the bolt up 3 mm with a force of 20N or more. The stopper piston moves and the lock is released during horizontal no-load installation or with the rod port pressurized. When the hand is released, the stopper piston is returned by the internal spring and enters the piston rod slot, locking the cylinder.



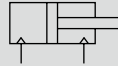


Linear slide cylinder Double acting single rod type

LCG Series

- Bore size: $\phi 6$, $\phi 8$, $\phi 12$, $\phi 16$, $\phi 20$, $\phi 25$

JIS symbol



Specifications

Descriptions		LCG					
Bore size	mm	$\phi 6$	$\phi 8$	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$
Actuation		Double acting					
Working fluid		Compressed air					
Max. working pressure	MPa	0.7					
Min. working pressure	MPa	0.15 (Note 1)					
Withstanding pressure	MPa	1					
Ambient temperature	°C	-10 to 60 (no freezing) (Note 2)					
Port size	Body side surface	M3	M5			Rc1/8	
	Rear body	M3			M5	Rc1/8	
Stroke tolerance	mm	+ 2.0 0 (Note 3)					
Working piston speed	mm/s	50 to 500 (Note 4)					
Cushion		Rubber cushioned					
Lubrication		Not required (when lubricating, use turbine oil Class 1 ISOVG 32)					
Allowable energy absorption	J	Refer to the table 3 on Page 1752.					

Note 1: 0.2MPa when using shock absorber type stopper with 6 mm diameter.

Note 2: For 6 mm bore cylinder, when using switches, max. ambient temperature is 50°C (45°C when installing on an iron plate).

Note 3: When not using a stopper, a slight gap may exist between the end plate and floating bushing.

Note 4: Use the stopper for adjusting the stroke between 50 and 200 mm/s.

Stroke length

Bore size (mm)	Standard stroke length (mm)
$\phi 6$	10, 20, 30, 40, 50
$\phi 8$	10, 20, 30, 40, 50, 75
$\phi 12$	10, 20, 30, 40, 50, 75, 100
$\phi 16$	10, 20, 30, 40, 50, 75, 100, 125
$\phi 20$	10, 20, 30, 40, 50, 75, 100, 125, 150
$\phi 25$	10, 20, 30, 40, 50, 75, 100, 125, 150

Note: Stroke length other than above is not available.

Switch specifications

- 1 color/2 color indicator

*The T0/T5 switch can be used with 220 VAC.
Consult with CKD for working conditions.

Descriptions	Reed 2 wire			
	T0H/T0V		T5H/T5V	
Applications	Programmable controller, relay		Programmable controller, relay, IC circuit (w/o light), serial connection	
Load voltage	12/24 VDC	110 VAC	5/12/24 VDC	110 VAC
Load current	5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less
Light	LED (ON lighting)		Without indicator light	
Leakage current	0 mA			

Descriptions	Proximity 2-wire		Proximity 3-wire		Proximity 2-wire		Proximity 3-wire	
	T2H/T2V	T2WH/T2WV	T3H/T3V	T3WH/T3WV	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay		Programmable controller		Programmable controller, relay	
Output method	-		NPN output		-		NPN output	
Power voltage	-		10 to 28 VDC		-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less		10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20 mA		100 mA or less	50 mA or less	5 to 20 mA		50 mA or less	
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1 mA or less		10 μA or less		1 mA or less		10 μA or less	

Cylinder weight

- Basic type

(Unit: g)

Bore size (mm)	Basic type stroke length (mm)								
	10	20	30	40	50	75	100	125	150
φ 6	150	150	180	220	240	-	-	-	-
φ 8	210	210	250	320	350	440	-	-	-
φ 12	480	480	480	530	590	770	920	-	-
φ 16	730	730	730	810	890	1,220	1,410	1,620	-
φ 20	1,260	1,260	1,260	1,380	1,500	1,920	2,210	2,510	2,800
φ 25	2,070	2,070	2,070	2,230	2,430	3,240	3,660	4,080	4,530

- Additional variation/option (stopper)

(Unit: g)

Bore size (mm)	Option, stopper symbol			
	S1 to S4	S5/S6	A1 to A4	A5/A6
φ 6	40	60	40	60
φ 8	50	70	50	70
φ 12	70	110	70	110
φ 16	130	180	130	180
φ 20	130	200	130	200
φ 25	200	270	200	270

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

Ending

Linear slide cylinder
Combined functions

How to order

Without switch



With switch



Model no.

A Bore size

B Stroke length

D Switch quantity

C Switch model no.

E Option

Note on model no. selection

- Note 1: When changing adjustable stroke range, use a discrete stopper for adjustable stroke listed on page 1711.
- Note 2: When using shock absorber type, refer to K in the stopper dimensions table on page 1726.
- Note 3: Refer to stopper dimensions on page 1726 for port positions.
- Note 4: When no stopper, port position of standard type are as following Fig. ① and ③.
- Note 5: The stopper for adjustable stroke and shock absorber stopper combination is available as a custom order.
- Note 6: Selectable only when using a stopper.
- Note 7: Refer to the selection table on Page 1709 for combinations of options.
- Note 8: For $\phi 6$ to $\phi 8$ cylinders with 10mm stroke or $\phi 12$ to $\phi 25$ cylinders with 20mm stroke or less, custom order is applied because A1**, A2**, A5** and A6** can not be adjusted by a standard stopper.
- Note 9: For $\phi 6$ to $\phi 8$ and 30mm stroke or less cylinder with S*** or A*** switch, when two switches will be installed, select F*H type switch.

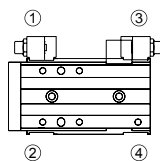
<Example of model number>

LCG-12-40-F2H-R-A1DT

Model: Linear slide cylinder double acting single rod type LCG

- A** Bore size : $\phi 12$
- B** Stroke length : 40 mm
- C** Switch model no. : Proximity, 2-wire
Axial lead wire
- D** Switch quantity : One on rod end
- E** Other options : Shock absorber type
Stopper position ①
Side surface and bottom side ports presence
Material and alloy steel (nitriding)

● Stopper position



Symbol	Descriptions
A Bore size	
6	$\phi 6$
8	$\phi 8$
12	$\phi 12$
16	$\phi 16$
20	$\phi 20$
25	$\phi 25$

B Stroke length (mm)		Bore size (ϕ)					
		6	8	12	16	20	25
10	10	●	●	●	●	●	●
20	20	●	●	●	●	●	●
30	30	●	●	●	●	●	●
40	40	●	●	●	●	●	●
50	50	●	●	●	●	●	●
75	75		●	●	●	●	●
100	100			●	●	●	●
125	125				●	●	●
150	150					●	●

C Switch model no.											
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire	Bore size						
					$\phi 6$	$\phi 8$	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	
F2H*	F2V*	Proximity	1 color indicator type	2-wire							
F3H*	F3V*		2 color indicator type	3-wire	●	●	●				
F2YH*	F2YV*		2 color indicator type	2-wire							
F3YH*	F3YV*		3 color indicator type	3-wire							
T0H*	T0V*	Reed	1 color indicator type	2-wire							
T5H*	T5V*		1 color indicator type	2-wire							
T2H*	T2V*		1 color indicator type	3-wire				●	●	●	
T3H*	T3V*		2 color indicator type	2-wire							
T2WH*	T2WV*	Proximity	2 color indicator type	3-wire							
T3WH*	T3WV*		3 color indicator type	3-wire							

*Lead wire length		Bore size					
		$\phi 6$	$\phi 8$	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$
Blank	1 m (standard)				●		
3	3 m (option)				●		
5	5 m (option)						●

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

E Option	
Blank	No option

S Stopper for adjustable stroke		Stopper installation position
Adjustable stroke single 5mm Note 1, Note 5, Note 7		
S1**	Stopper position ① (changeable to ④)	
S2**	Stopper position ② (changeable to ③)	
S3**	Stopper position ③ (changeable to ②)	
S4**	Stopper position ④ (changeable to ①)	
S5**	Stopper position ①, ③	
S6**	Stopper position ②, ④	

A Shock absorber type stopper Note 2, Note 5, Note 7		Stopper installation position
A1**	Stopper position ① (changeable to ④)	
A2**	Stopper position ② (changeable to ③)	
A3**	Stopper position ③ (changeable to ②)	
A4**	Stopper position ④ (changeable to ①)	
A5**	Stopper position ①, ③	
A6**	Stopper position ②, ④	

** section	
Blank	Port at stopper section: no port
D	Port at stopper section: side surface and bottom side ports presence Note 3, Note 6
Blank	Stopper block material: Rolled steel
T	Stopper block material: Alloy steel (nitriding) Note 6

LCG double acting single rod type selection table

(Combinations of stopper for adjustable stroke and shock absorber type stopper)

○: Combination possible -: Combination not available

Model no. symbol	Option symbol		Stopper for adjustable stroke						Shock absorber type stopper						
	Bore size	Stroke length	S1	S2	S3	S4	S5	S6	A1	A2	A3	A4	A5	A6	
LCG	φ 6, φ 8	10	○	○	○	○	○	○	○	-	-	○	○	-	-
		20 and over	○	○	○	○	○	○	○	○	○	○	○	○	○
	φ 12 to φ 25	10 to 20	○	○	○	○	○	○	○	-	-	○	○	-	-
		30 and over	○	○	○	○	○	○	○	○	○	○	○	○	○

The option symbol D: with stopper section port and T stopper block alloy steel (nitriding) combination follows the combination table above.

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

Linear slide cylinder
Combined functions

How to order switch

For ϕ 6 to ϕ 12

SW - F2H

Switch model no.
(Page 1708 section ©)

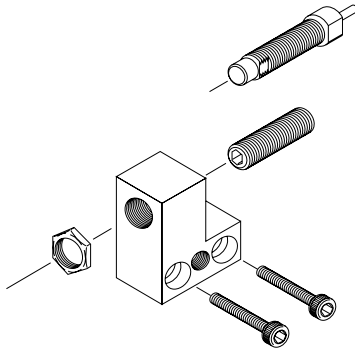
For ϕ 16 to ϕ 25

SW - T2H3

Switch model no.
(Page 1708 section ©)

How to order stopper set

- Stopper section and stopper for adjustable stroke or shock absorber stopper set
- Use when changing from standard to stopper for adjustable stroke or with shock absorber stopper



LCG - 12 - S 2 D

Bore size
(Page 1708 section A)

A Stopper type	
S	Stopper for adjustable stroke
A	Shock absorber type stopper
B Stopper installation position	
1	Stopper position ① or ④
2	Stopper position ② or ③
C Port at stopper section	
Blank	No port
D	Side surface and bottom port presence

Precautions for ordering stopper set

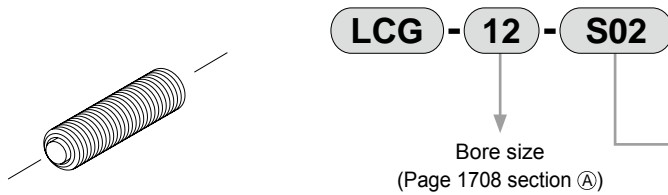
S01 is included in the stopper for adjustable stroke parts for the stopper for adjustable stroke set.
Only when installed on installation position (1), (2) (refer to page 1708), add the right part according to stroke length and adjustable stroke length.

- : not available

Model no. symbol	Option symbol		Discrete stopper for adjustable stroke		
	Bore size	Stroke length	Adjustable stroke length (mm)		
			-5	-15	-25
LCG Series	ϕ 6, ϕ 8	10	S02	-	-
		20 and over	Additional not required	S02	-
	ϕ 12 to ϕ 25	10	S03	-	-
		20	S02	S03	-
		30 and over	Additional not required	S02	S03

How to order the discrete stopper for adjustable stroke

- Hexagon socket head set screw with urethane
- Used when changing the adjustable stroke range or setting custom stroke length



A Adjustable stroke range	
S01	Single 5mm (standard)
S02	Single 15mm
S03	Single 25mm

Indicate S01, S02, S03 for ①.

Note: S03 is not available for $\phi 6$, $\phi 8$.

Depending on the type, the incompatible models or adjustable stroke ranges may differ from the above values.

Cautions when purchasing discrete stopper

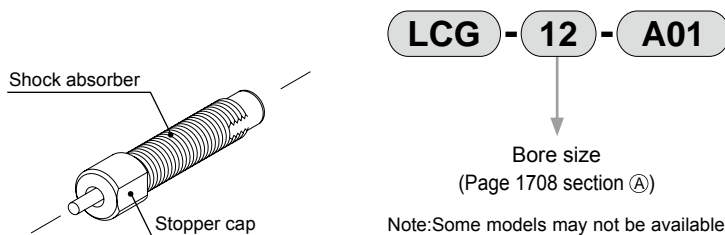
Only when installing a stopper for adjustable stroke or a shock absorber type stopper on installation position (1) or (2) (refer to page 1708), the right combination may be applied depending on stroke length and adjustable stroke length.

Model no. symbol	Option symbol		Discrete stopper for adjustable stroke			Discrete shock absorber type stopper
			Adjustable stroke length (mm)			
			-5	-15	-25	
LCG Series -S1, S2, S5, S6 -A1, A2, A5, A6	$\phi 6, \phi 8$	10	S02	-	-	-
		20 and over	S01	S02	-	A01
	$\phi 12$ to $\phi 25$	10	S03	-	-	-
		20	S02	S03	-	-
		30 and over	S01	S02	S03	A01
		-	-	-	-	-

- : Not available

How to order the discrete shock absorber stopper

- Shock absorber and stopper cap set
- Used when changing from stopper for adjustable stroke to shock absorber type stopper



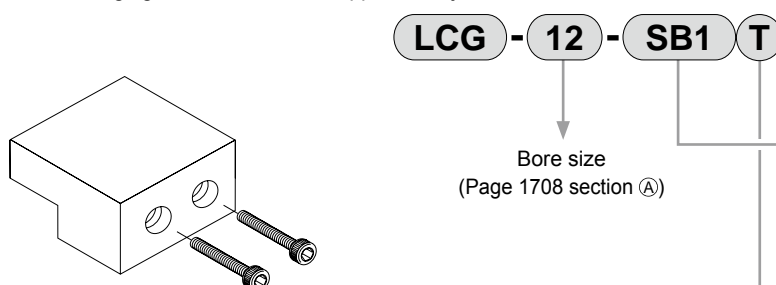
Note: Some models may not be available depending on the type. Refer to Page 1708. Refer to page 1726 for the stroke adjustment range of the shock absorber type stopper.

Applicable shock absorber model No.

Model	Shock absorber model no.
LCG-6	NCK-00-0.1
LCG-8	NCK-00-0.3
LCG-12	NCK-00-0.3
LCG-16	NCK-00-0.7
LCG-20	NCK-00-1.2
LCG-25	NCK-00-1.2

Discrete stopper block model no. display

- Use when changing from standard to stopper for adjustable stroke or with shock absorber stopper



A Stopper block	
SB1	$\phi 6, \phi 8$: 30 stroke or less $\phi 12$ to $\phi 25$: 50 stroke or less
SB2	$\phi 6, \phi 8$: 40 stroke and over $\phi 12$ to $\phi 25$: 75 stroke and over

B Material	
Blank	Stopper block material: Rolled steel
T	Stopper block material: Alloy steel (nitriding)

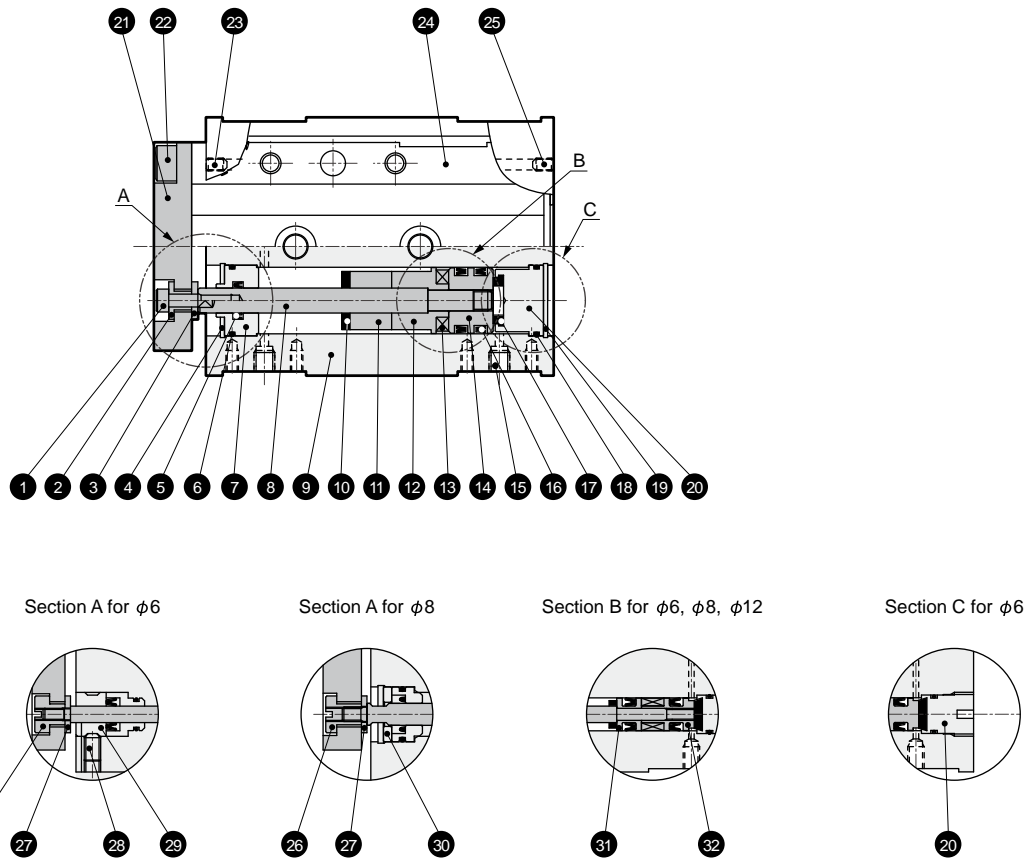
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC

Ending

Linear slide cylinder
Combined functions

Internal structure and parts list

● LCG



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Hexagon socket head cap bolt	Alloy steel	Zinc chromate	17	Cushion rubber (H)	Urethane rubber	
2	Floating bush A	Alloy steel	Zinc chromate	18	Guard gasket	Nitrile rubber	
3	Floating bush B	Stainless steel		19	C type snap ring	φ 8: Steel φ 12 to 25: Stainless steel	Only φ 8 to 25
4	C type snap ring	φ 8: Steel φ 12 to 25: Stainless steel	Only φ 8 to 25	20	Guard	Aluminum alloy	Chromate
5	Rod packing seal	Nitrile rubber		21	End plate	Aluminum alloy	Alumite
6	Metal gasket	Nitrile rubber		22	Hexagon socket head cap bolt	Alloy steel	Zinc chromate
7	Rod bushing	Aluminum alloy	Alumite	23	Plug	Stainless steel	
8	Piston rod	Stainless steel		24	Table	φ 6 to 16: Stainless steel φ 20, 25: Steel	
9	Cylinder body	Aluminum alloy	Hard alumite	25	Hexagon socket head set screw	Stainless steel	
10	Cushion rubber (R)	Urethane rubber		26	Floating bush A	Stainless steel	
11	Spacer	Aluminum alloy	Only φ 6: 10, 40, 50st Only φ 8: 10st Only φ 12, 16, 20, 25: 10, 20st	27	Floating bush B	Stainless steel	
12	Magnet spacer	Aluminum alloy	Chromate	28	Hexagon socket head set screw	Stainless steel	Only φ 6
13	Magnet	Plastic		29	Rod bushing A	Stainless steel	
14	Piston	Aluminum alloy	Chromate	30	Cap	Aluminum alloy	Chromate
15	Plug	Stainless steel		31	Piston A	Aluminum alloy	Chromate
16	Piston packing seal	Nitrile rubber		32	Piston B	Aluminum alloy	Chromate

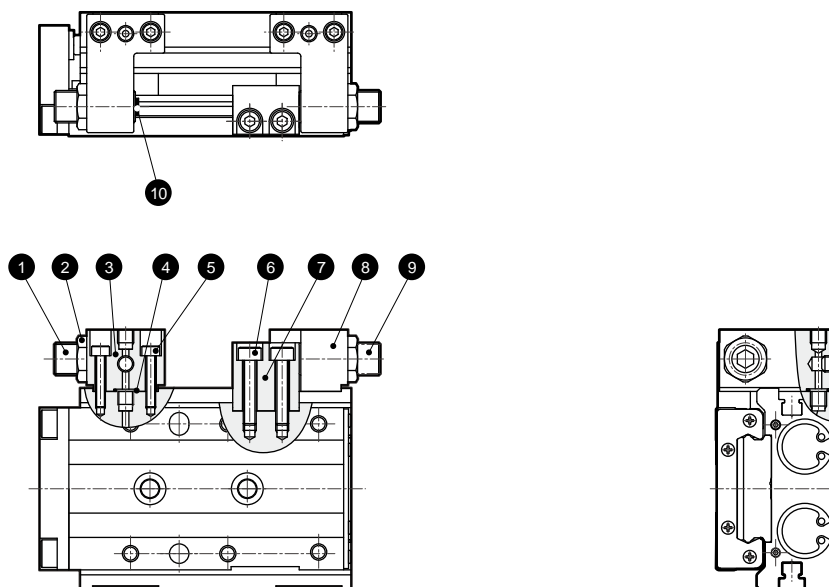
Repair parts list

Bore size (mm)	Kit No.	Repair parts number
φ 6	LCG-6K	
φ 8	LCG-8K	
φ 12	LCG-12K	
φ 16	LCG-16K	
φ 20	LCG-20K	
φ 25	LCG-25K	

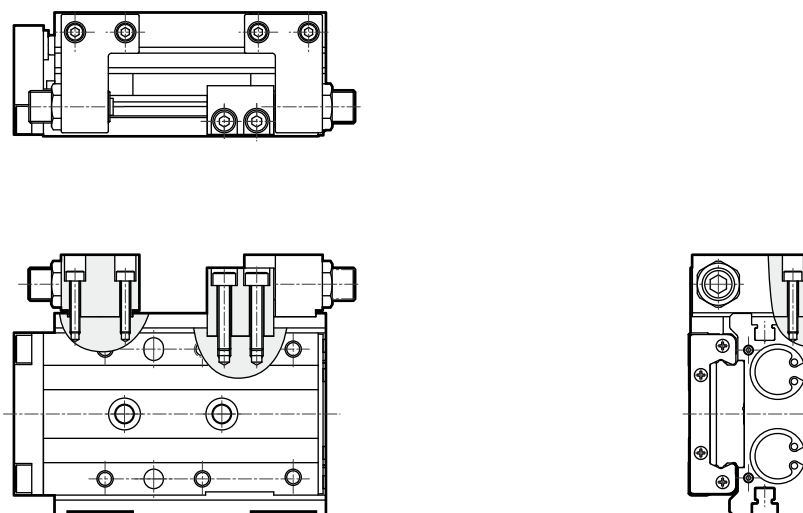
Internal structure and parts list

Configuration with stopper

- Type of stopper part with side and bottom parts (symbol D)



- Without port at stopper section



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Stopper bolt	Alloy steel	Nickeling	7	Stopper block (Stopper block symbol: Blank)	Steel	Nickeling
2	Hexagon nut	Alloy steel	Nickeling		Stopper block (Stopper block symbol: T)	Alloy steel	Nitriding
3	Stopper A	Aluminum alloy	Alumite	8	Stopper B	Aluminum alloy	Alumite
4	Gasket	Urethane rubber		9	Stopper bolt	Alloy steel	Nickeling
5	Hexagon socket head cap bolt	Alloy steel	Zinc chromate	10	Cushion rubber	Urethane rubber	
6	Hexagon socket head cap bolt	Alloy steel	Zinc chromate				

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

Ending

Linear slide cylinder
Combined functions

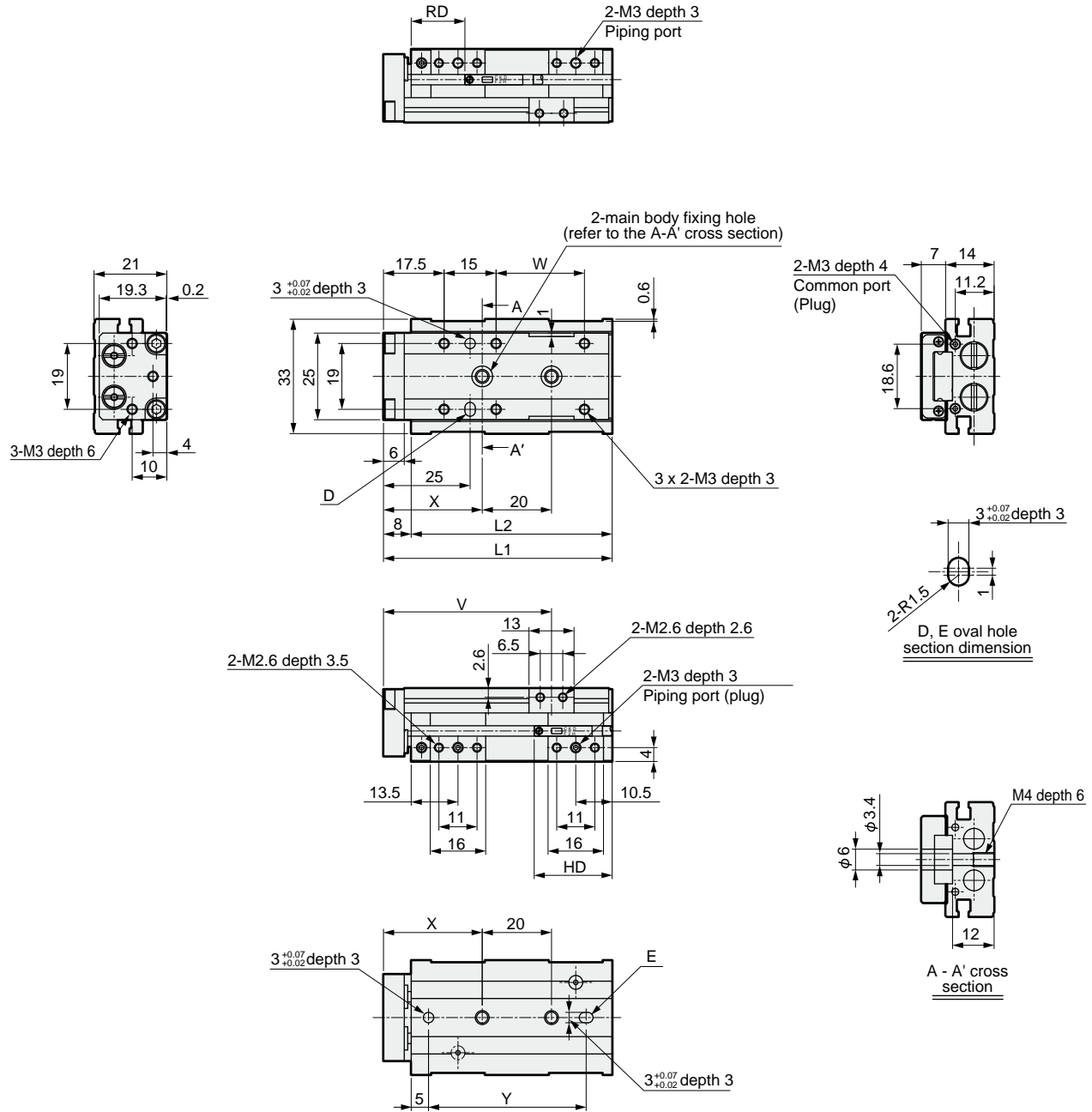


Dimensions (bore size: $\phi 6$)

● LCG-6

Stroke length: 10, 20, 30

(The main body fixing holes in this drawing is for 20 mm stroke)



Dimensions table per stroke length

Stroke length	10	20	30
L1	66	76	
L2	58	68	
V	48.5	58.5	
W	25.5	35.5	
X	28.5	26	
Y	45.5	43	
RD	25.5	15.5	
HD	22.5		

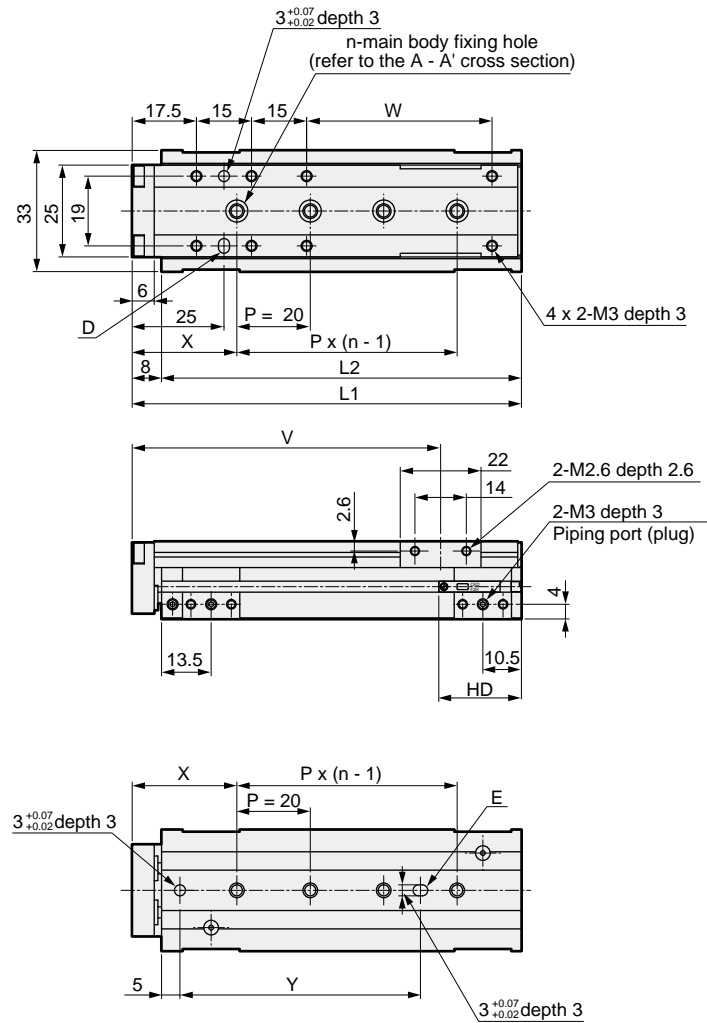
Dimensions (bore size: $\phi 6$)



● LCG-6

Stroke length: 40, 50

(The main body fixing holes in this drawing is for 50 mm stroke)



Dimensions table per stroke length

Stroke length	40	50
L1	96	106
L2	88	98
n	3	4
V	74	84
W	40.5	50.5
X	27	28.5
Y	44	65.5
RD	25.5	
HD	22.5	

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

Linear slide cylinder
Combined functions

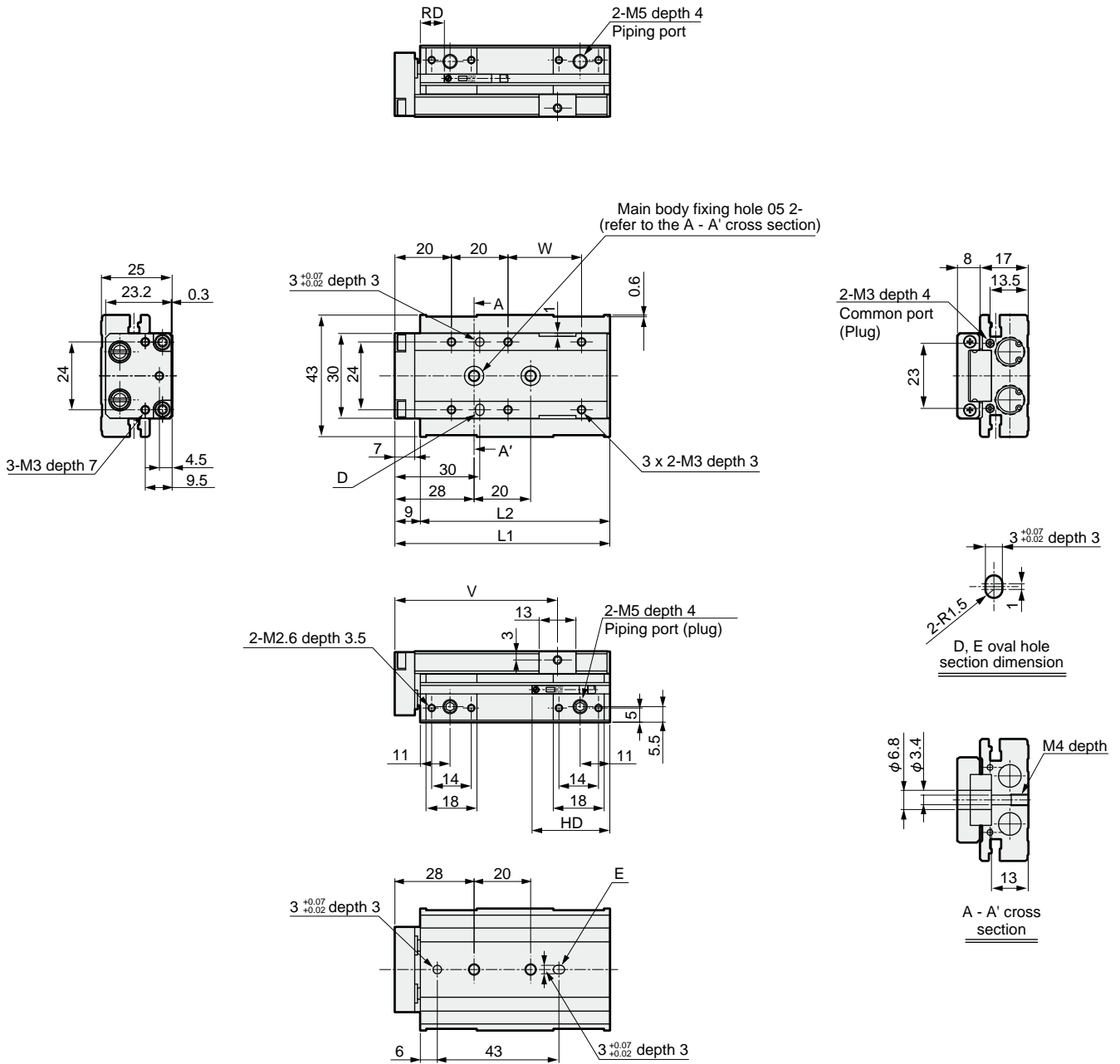
Dimensions (bore size: $\phi 8$)



● LCG-8

Stroke length: 10, 20, 30

(The main body fixing holes in this drawing is for 30 mm stroke)



Dimensions table per stroke length

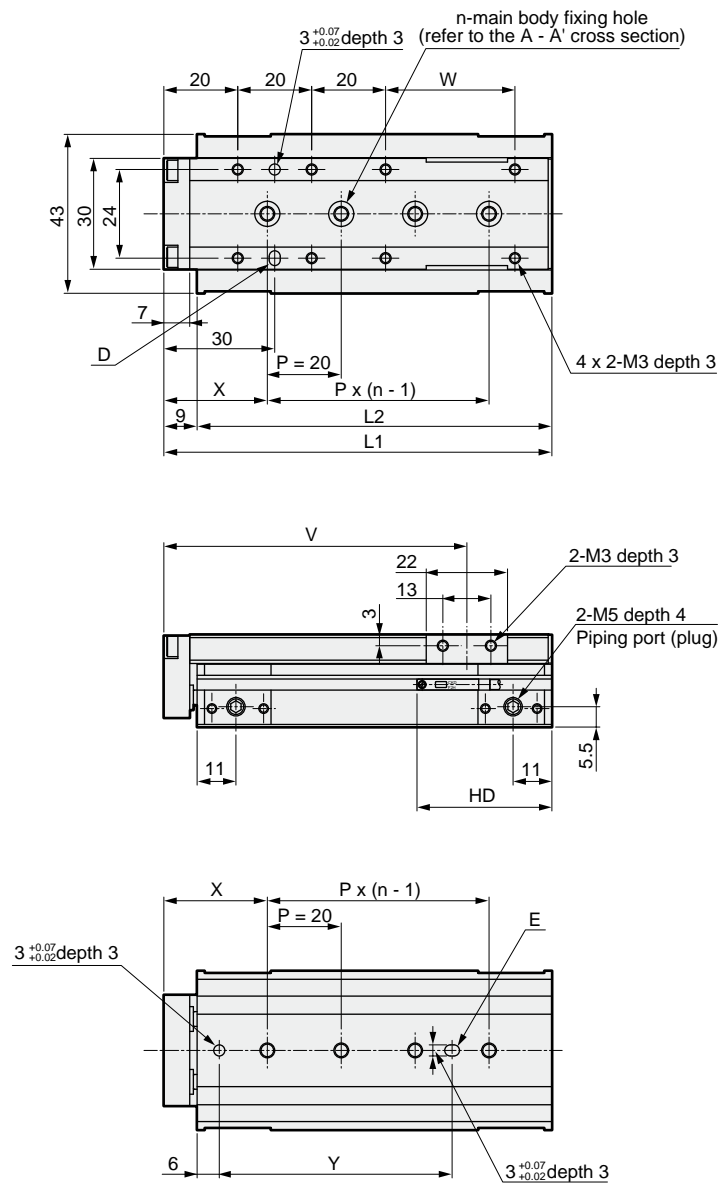
Stroke length	10	20	30
L1	66	76	76
L2	57	67	67
V	47.5	57.5	57.5
W	16	26	26
RD	24	14	14
HD	23		

Dimensions (bore size: $\phi 8$)

● LCG-8

Stroke length: 40, 50, 75

(The main body fixing holes in this drawing is for 50 mm stroke)



Dimensions table per stroke length

Stroke length	40	50	75
L1	95	105	130
L2	86	96	121
n	3	4	5
V	72	82	107
W	25	35	60
X	26.5	28	25
Y	41.5	63	80
RD	14		
HD	32		

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

Linear slide cylinder
Combined functions

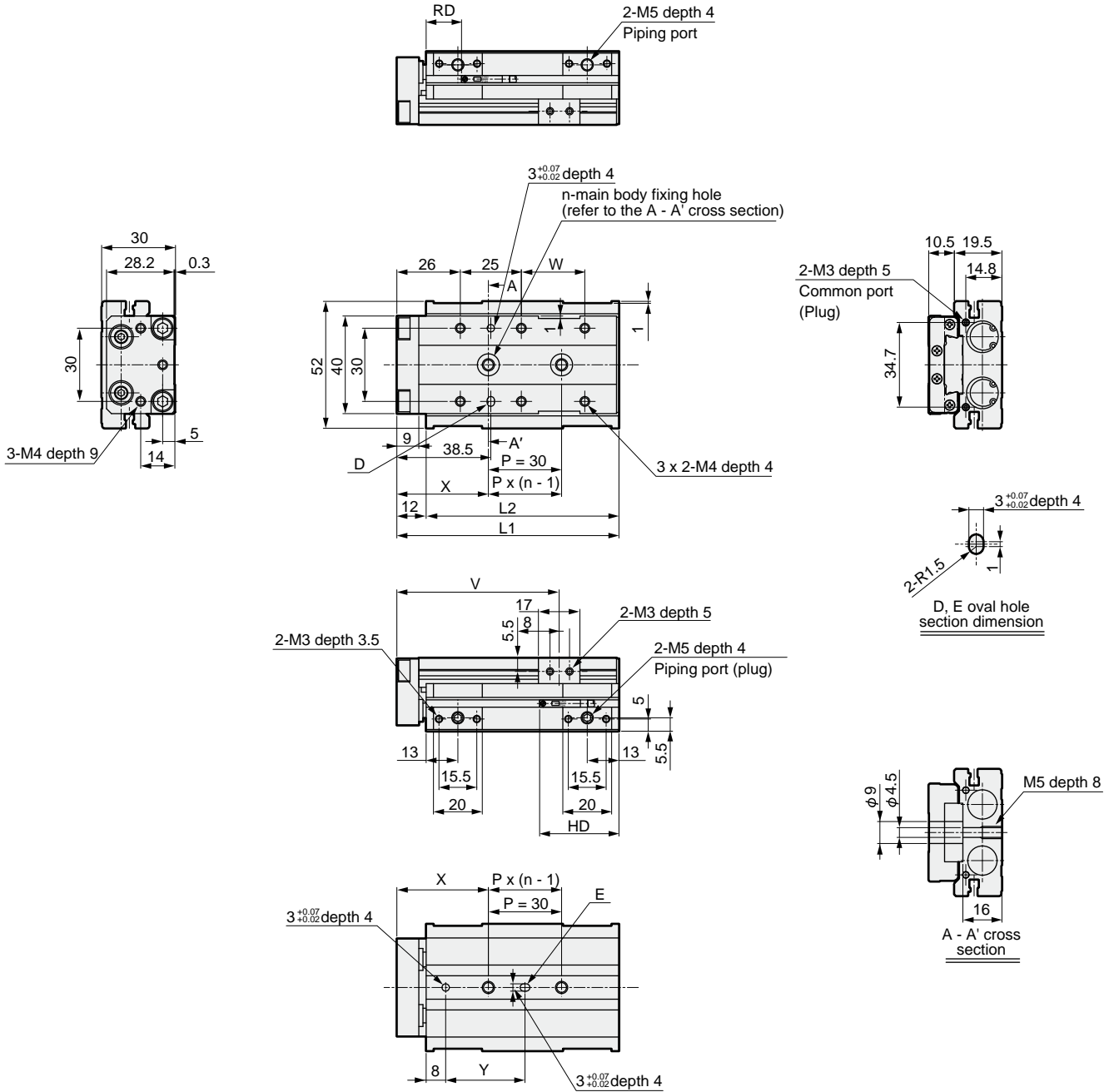
Dimensions (bore size: $\phi 12$)



● LCG-12

Stroke length: 10, 20, 30, 40, 50

(The main body fixing holes in this drawing is for 30 mm stroke)



Dimensions table per stroke length

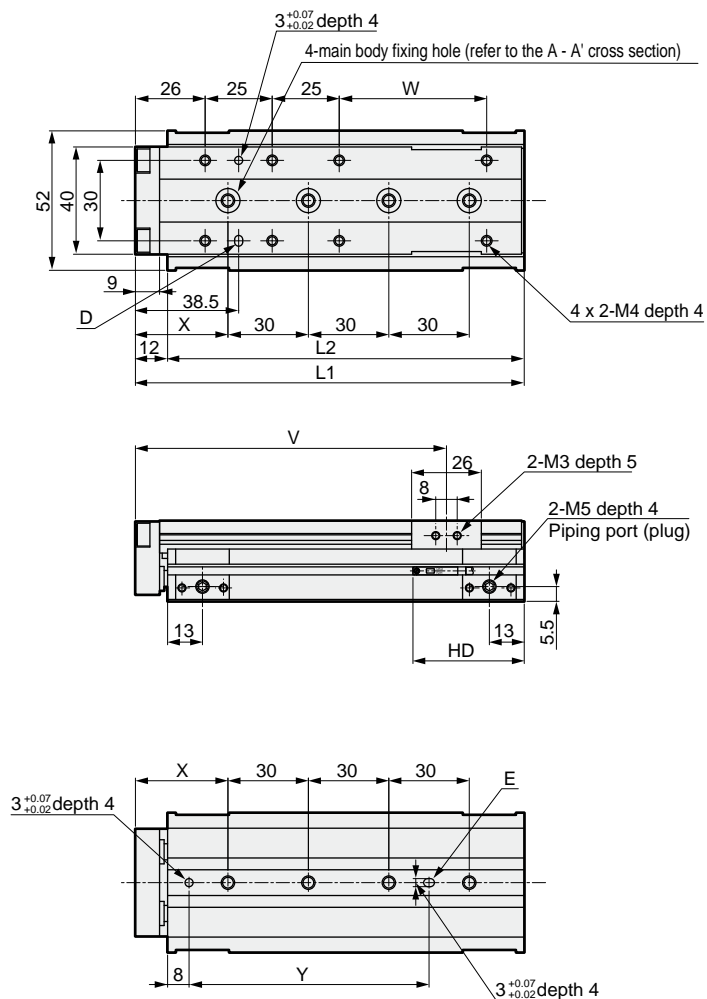
Stroke length	10	20	30	40	50
L1		91		101	111
L2		79		89	99
n		2		3	
V		66.5		76.5	86.5
W		26		36	46
X		37.5		36	32
Y		32.5		31	57
RD	41.5	31.5		21.5	
HD			27		

Dimensions (bore size: $\phi 12$)

● LCG-12

Stroke length: 75,100

(The main body fixing holes in this drawing is for 100 mm stroke)



Dimensions table per stroke length

Stroke length	75	100
L1	145	170
L2	133	158
V	116	141
W	55	80
X	34.5	47
Y	89.5	102
RD	21.5	
HD	36	

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

Linear slide cylinder
Combined functions

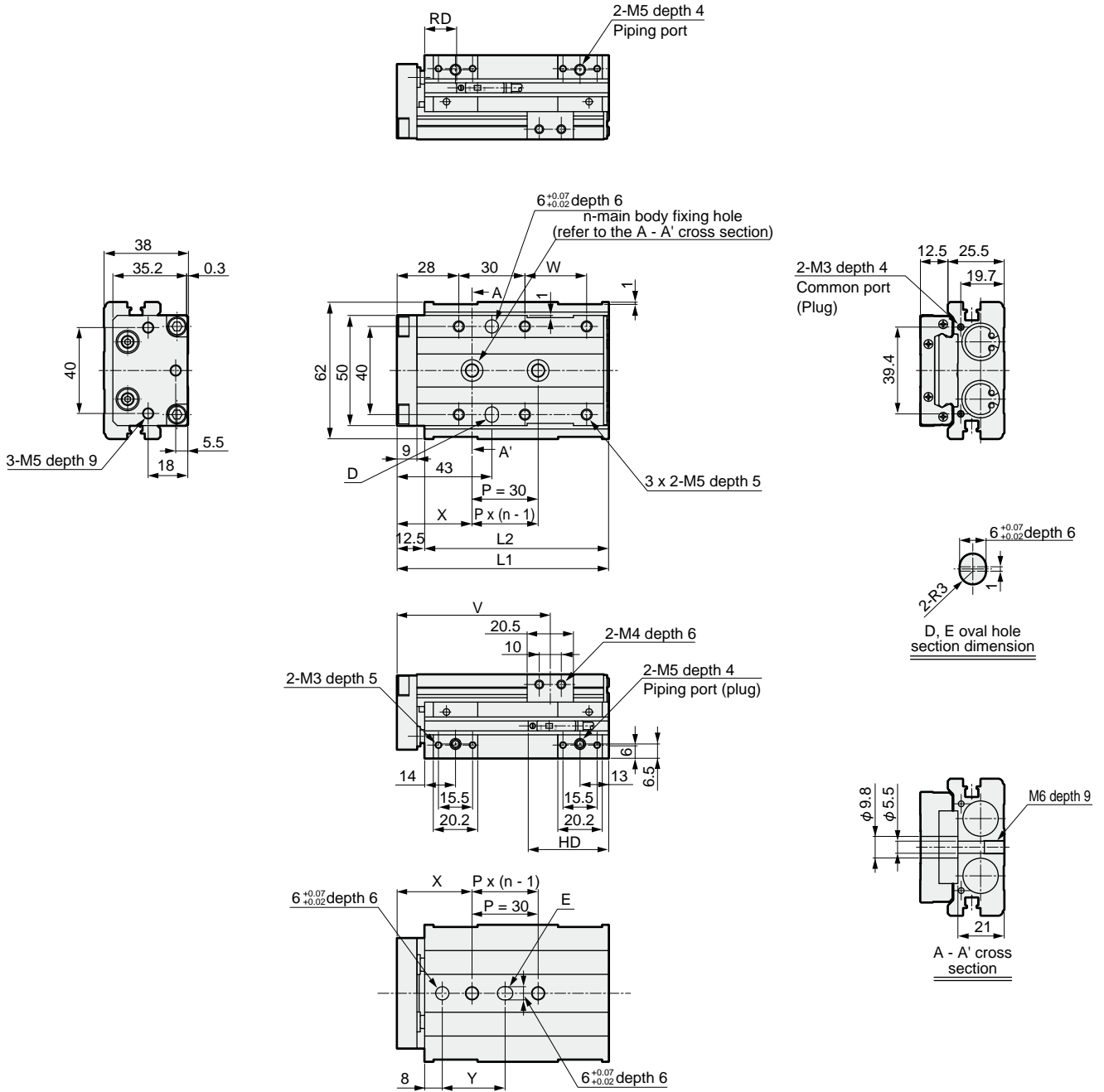


Dimensions (bore size: $\phi 16$)

● LCG-16

Stroke length: 10, 20, 30, 40, 50

(The main body fixing holes in this drawing is for 30 mm stroke)



Dimensions table per stroke length

Stroke length	10	20	30	40	50
L1	96		106	116	
L2	83.5		93.5	103.5	
n	2			3	
V	69.8		79.8	89.8	
W	28		38	48	
X	34		45.5	35.5	
Y	28.5		40	60	
T0/5*	RD	37	27	17	
	HD	36.5			
T2/3*	RD	39.5	29.5	19.5	
	HD	34			

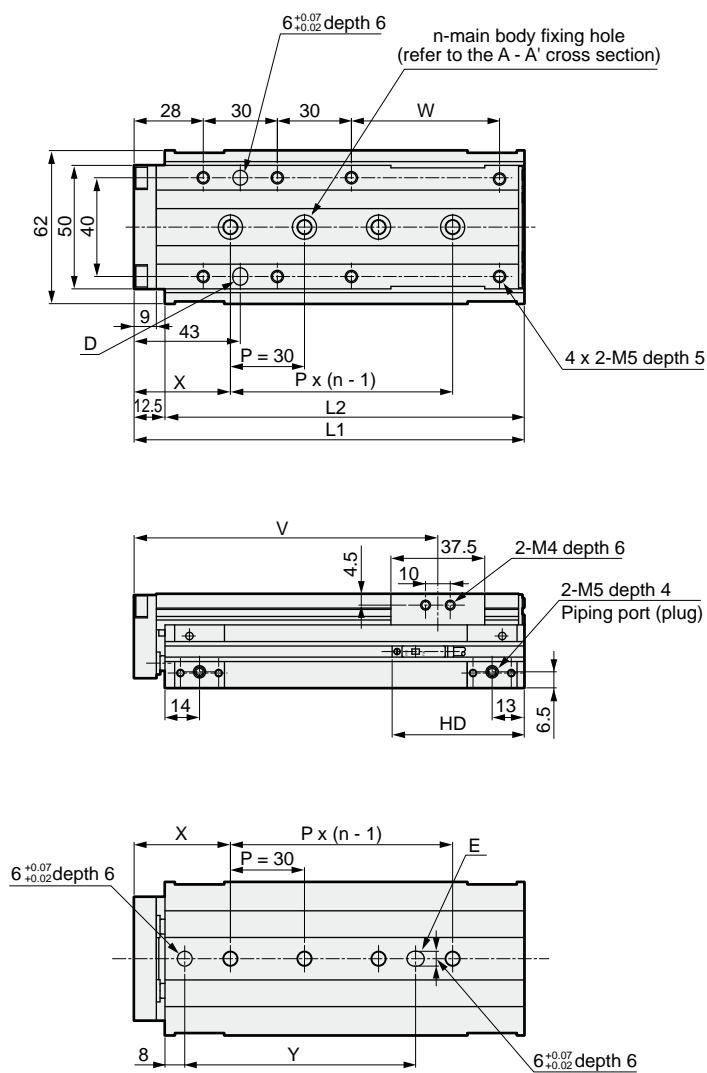
Dimensions (bore size: $\phi 16$)



● LCG-16

Stroke length: 75, 100, 125

(The main body fixing holes in this drawing is for 75 mm stroke)



Dimensions table per stroke length

Stroke length	75	100	125
L1	158	183	208
L2	145.5	170.5	195.5
n	4	5	
V	123.3	148.3	173.3
W	60	85	110
X	39	37	49
Y	93.5	121.5	133.5
T0/5*	RD	17	
	HD	53.5	
T2/3W*	RD	19.5	
	HD	51	

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

Linear slide cylinder
Combined functions

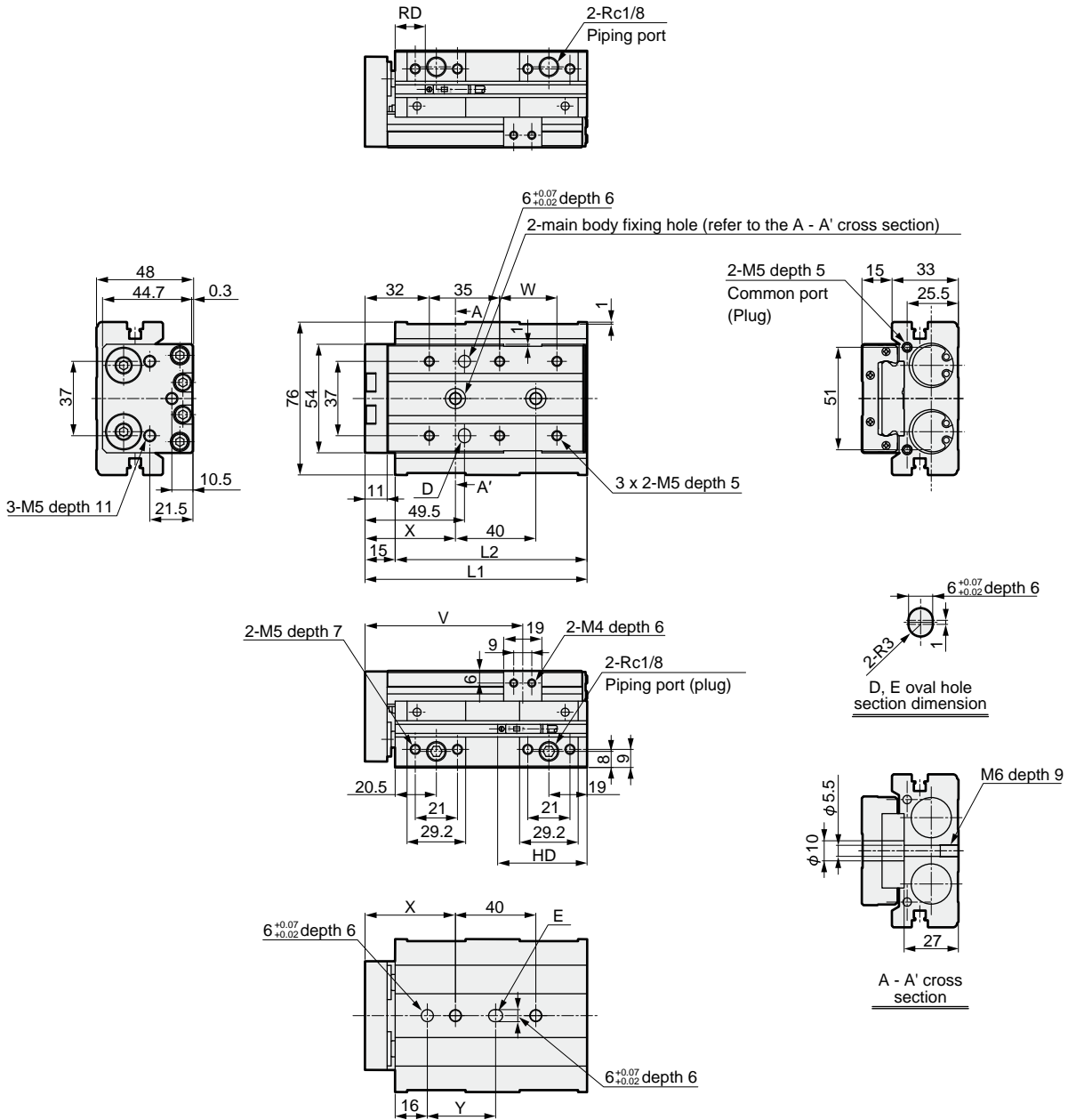


Dimensions (bore size: $\phi 20$)

● LCG-20

Stroke length: 10, 20, 30, 40, 50

(The main body fixing holes in this drawing is for 30 mm stroke)



Dimensions table per stroke length

Stroke length	10	20	30	40	50
L1		110.5	120.5	130.5	
L2		95.5	105.5	115.5	
V		78.5	88.5	98.5	
W		28.5	38.5	48.5	
X		45	51	49	
Y		34	40	38	
T0/5*	RD	36	26	16	
T2/3*	HD	49.5			
T2/3W*	RD	38.5	28.5	18.5	
	HD	47			

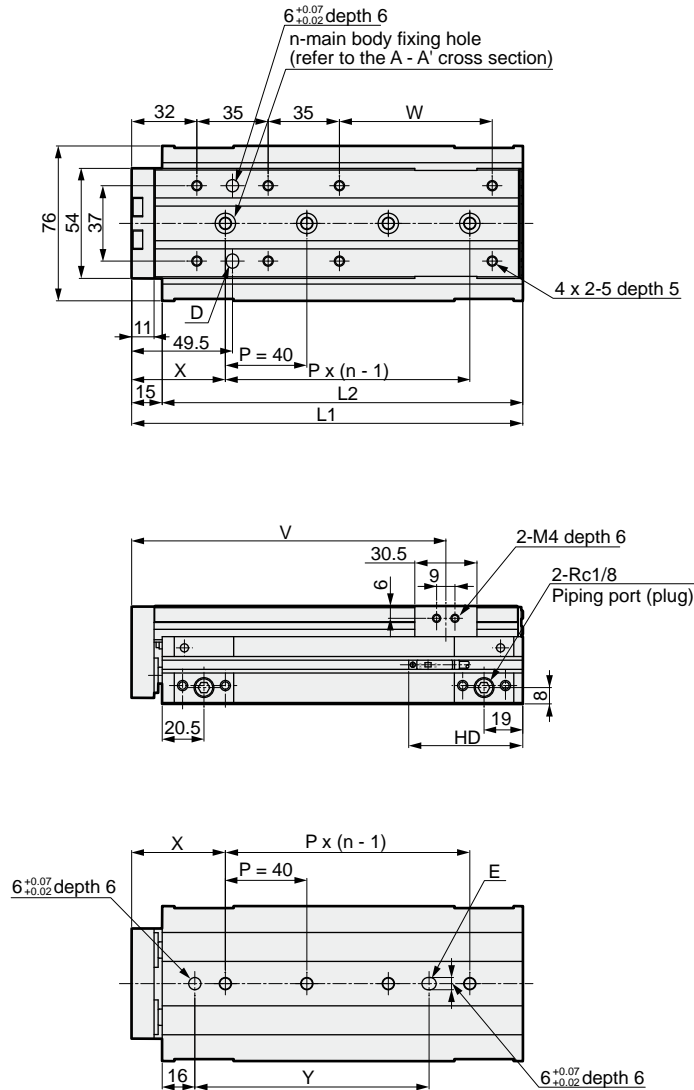
Dimensions (bore size: $\phi 20$)



● LCG-20

Stroke length: 75, 100, 125, 150

(The main body fixing holes in this drawing is for 100 mm stroke)



Dimensions table per stroke length

Stroke length	75	100	125	150
L1	167	192	217	242
L2	152	177	202	227
n	3	4	5	
V	129.3	154.3	179.3	204.3
W	50	75	100	125
X	46	53	51	
Y	75	115	122	160
T0/5*	RD	16		
	T2/3*	HD	61	
T2/3W*	RD	18.5		
	HD	58.5		

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

Linear slide cylinder
Combined functions

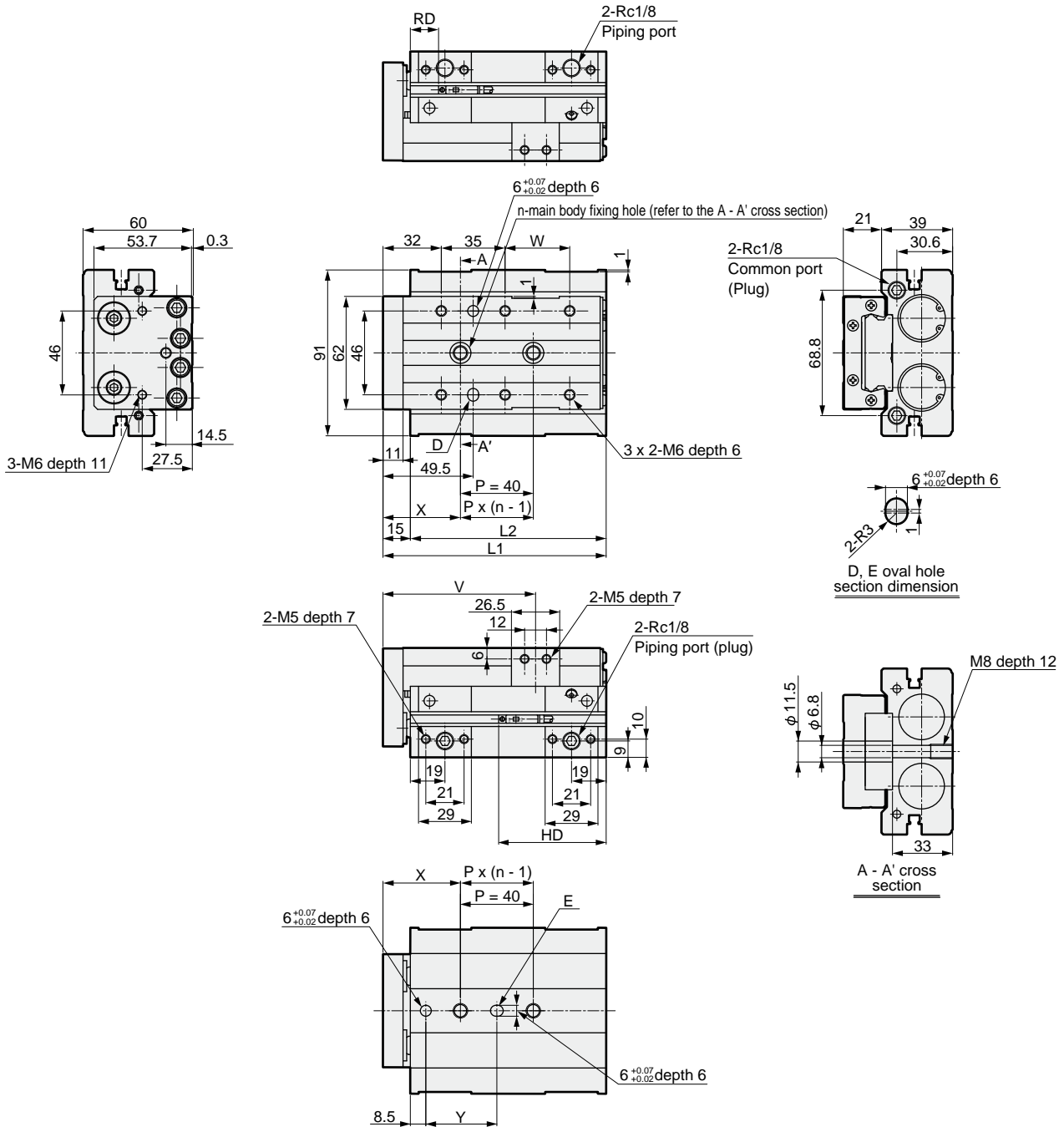
Dimensions (bore size: $\phi 25$)



● LCG-25

Stroke length: 10, 20, 30, 40, 50

(The main body fixing holes in this drawing is for 30 mm stroke)



Dimensions table per stroke length

Stroke length	10	20	30	40	50
L1		122.5	132.5	142.5	
L2		107.5	117.5	127.5	
n		2	3	2	
V		83.8	93.8	103.8	
W		35.5	45.5	55.5	
X		42.5	45.5	60.5	
Y		39	42	57	
T0/5*	RD	38.5	28.5	18.5	
T2/3*	HD	59			
T2/3W*	RD	41	31	21	
	HD	56.5			

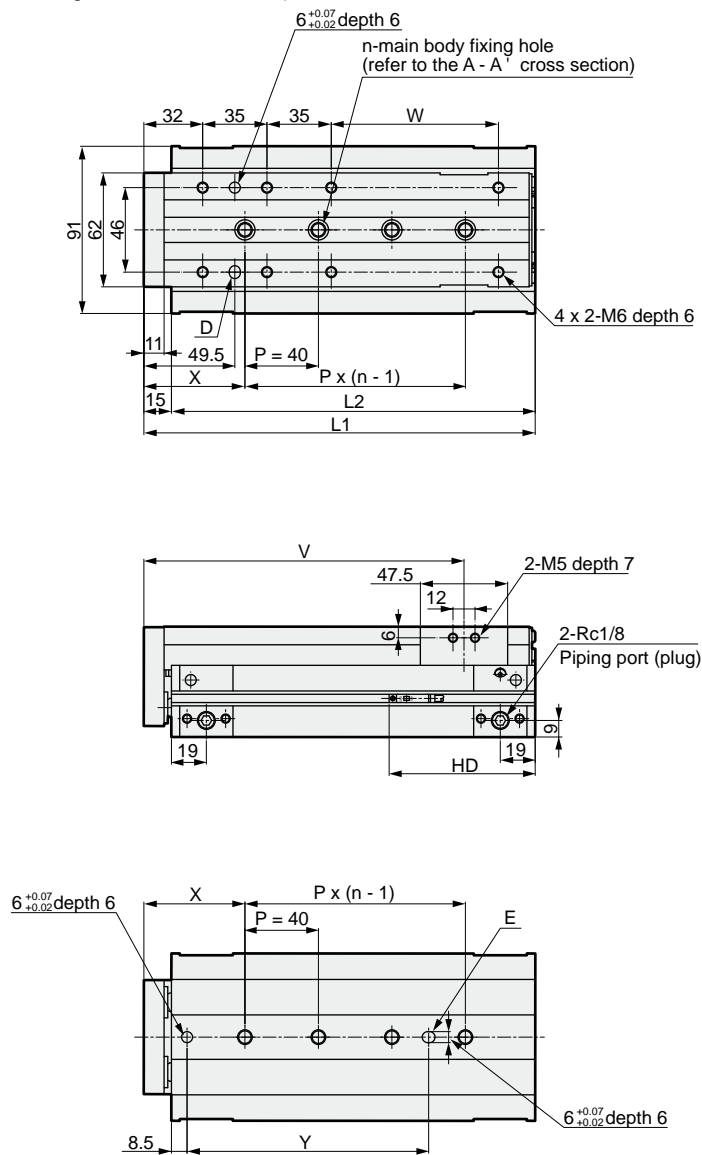
Dimensions (bore size: $\phi 25$)



● LCG-25

Stroke length: 75,100,125,150

(The main body fixing holes in this drawing is for 100 mm stroke)



Dimensions table per stroke length

Stroke length	75	100	125	150
L1	188	213	238	263
L2	173	198	223	248
n	3	4	5	
V	138.8	163.8	188.8	213.8
W	66	91	116	141
X	60	55	45	60
Y	96.5	131.5	161.5	176.5
T0/5*	RD	18.5		
	HD	79.5		
T2/3W*	RD	21		
	HD	77		

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
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JSC3
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JSB3
LMB
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STR2
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RCC2
MFC
SHC
GLC
Ending

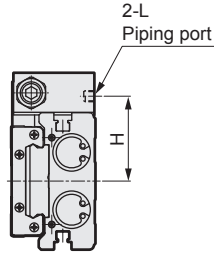
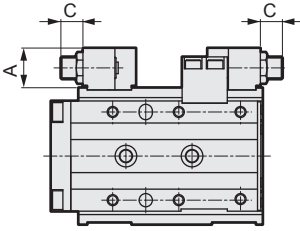
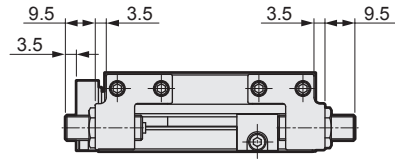
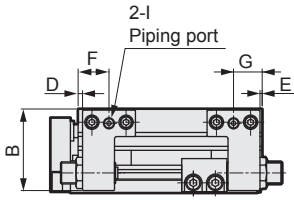
Linear slide cylinder
Combined functions

Dimensions: Option



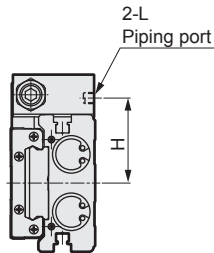
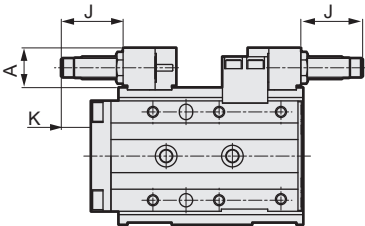
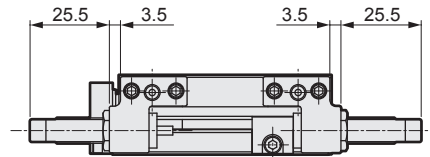
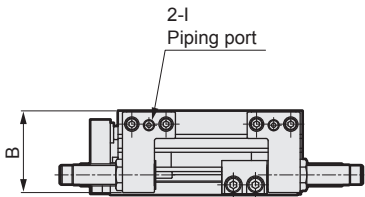
● Stopper for adjustable stroke (S1 to S6)

· For $\phi 8$



● Shock absorber type stopper (A1 to A6)

· For $\phi 8$



Note 1: E, H and L dimensions are applied only when ports are provided at stopper section (S*D*, A*D*)

Note 2: The adjustable stroke range of the stopper for adjustable stroke is 5mm per side.

Note 3: For position locking function type, S3** to S6** and A3** to A6** are not available.

Symbol	A	B	C	D	E	F	G	H	I	J	K	L	Shock absorber type stopper adjustable stroke range (single)
$\phi 6$	14	19.5	11	4	1	13.5	10.5	24	M3 depth 3	21	9	M3 depth 3	9
$\phi 8$	15.6	24.5	9.5	0.5	0.5	10.5	10.5	27.3	M5 depth 4	25.5	16	M5 depth 4	17
$\phi 12$	15.5	29	12	1	1	13	13	31	M5 depth 4	25.5	12.5	M5 depth 4	14.5
$\phi 16$	18	37	10	2	1	14	13	39	M5 depth 4	28.5	14	M5 depth 4	15
$\phi 20$	20.5	45	14.5	4	2.5	20.5	19	46	Rc1/8	29.5	10.5	M5 depth 4	13
$\phi 25$	20.5	57	11.5	2.5	2.5	19	19	54.5	Rc1/8	26.5	9	M5 depth 4	10