



Linear slide cylinder Double acting/Single rod

Long service life cylinder

LCG-HP1 Series

● Bore size: ø6/ø8/ø12/ø16/ø20/ø25



Specifications

Item		LCG-HP1					
Bore size mm		ø6	ø8	ø12	ø16	ø20	ø25
Actuation		Double acting					
Working fluid		Compressed air					
Max. working pressure MPa		0.7					
Min. working pressure MPa		0.15 (*1)					
Proof pressure MPa		1.05					
Ambient temperature °C		-10 to 60 (no freezing)					
Port size	Main body side	M3	M5			Rc1/8	
	Main body back	M3			M5	Rc1/8	
Stroke tolerance mm		+2.0 0 (*2)					
Working piston speed mm/s		50 to 500 (*3)					
Cushion		With rubber cushion					
Lubrication		Not required					
Allowable absorbed energy J		Table below.					

*1: 0.2MPa when using the ø6 shock absorber stopper.

*2: Note that there will be a slight gap between the end plate and floating bush if no stopper is attached.

*3: Use the stroke adjusting stopper at 50 to 200mm/s.

*4: The stroke adjusting stopper for 0.3 MPa and over working pressure is the metal sealing type.

Stroke

Bore size (mm)	Standard stroke (mm)
ø6	10, 20, 30, 40, 50
ø8	10, 20, 30, 40, 50, 75
ø12	10, 20, 30, 40, 50, 75, 100
ø16	10, 20, 30, 40, 50, 75, 100, 125
ø20	10, 20, 30, 40, 50, 75, 100, 125, 150
ø25	10, 20, 30, 40, 50, 75, 100, 125, 150

Note: Products with strokes other than the above are not available.

Allowable absorbed energy (E₀)

Bore size	Standard (J)	With stroke adjusting stopper(J)	With shock absorber stopper(J)
ø6	0.025	0.0032	0.14
ø8	0.058	0.0032	0.25
ø12	0.112	0.014	0.25
ø16	0.176	0.043	0.65
ø20	0.314	0.055	1.3
ø25	0.314	0.14	1.3

For dimensions, refer to the LCG Series in "Pneumatic Cylinders II (CB-030SA)".

How to order (ø6 to ø16)

Without switch (built-in magnet for switch)

LCG - 8 - 40 - S5 - HP1

With switch (built-in magnet for switch)

LCG - 12 - 40 - F2H* - R - A1DT - HP1

Model No.

A Tube
Bore size

B Stroke

D Switch quantity

C Switch model No.

⚠ Precautions for model No. selection

- *1: To change the adjustable stroke range, use the discrete stroke adjusting stopper on page 38.
- *2: For the adjustable stroke range with a shock absorber stopper, refer to the stopper dimensions table in "Pneumatic Cylinders II (No. CB-030SA)".
- *3: For the port position, refer to the stopper dimensions in "Pneumatic Cylinders II (No. CB-030SA)".
- *4: The standard port positions without stopper are ① and ③ in the figure below.
- *5: Combination of the stroke adjusting stopper and shock absorber stopper is made to order.
- *6: Can be selected for the type with stopper only.
- *7: Refer to the selection table below for combinations of options.
- *8: A1**, A2**, A5** and A6** of ø6 to ø8 with 10 mm stroke and ø12 or ø16 with 20 mm stroke or less are made to order since adjustment is not possible with the standard stopper.
- *9: For the ø6 to ø8 30 stroke or less with S*** or A***, if using two switches, select the F □ H switch.
- *10: The rust proof type is made to order.
- *11: The stroke adjusting stopper for 0.3 MPa and over working pressure is the metal sealing type.
- *12: When changing the stopper position from the head side to the rod side, the stopper must be purchased separately according to the stroke and adjustable stroke. Refer to "Precautions when purchasing discrete stopper" on page 38.
A1, A2 and adjustable stroke of 15 mm and 25 mm may not be available depending on the stroke.

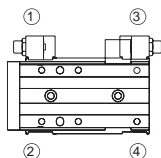
[Example of model No.]

LCG-12-40-F2H-R-A1DT-HP1

Model: Linear slide cylinder, Double acting/Single rod LCG

- A Bore size : ø12
B Stroke : 40 mm
C Switch model No. : Proximity/2-wire
Lead wire straight type
D Switch quantity : 1 (on rod side)
E Other options : Shock absorber stopper
Stopper position ①
With side and bottom ports
Material, steel (nitriding)

● Stopper position



LCG Double acting/Single rod selection table

(Combination with stroke adjusting stopper, shock absorber stopper)

Model No. code	Option code		Stroke adjusting stopper						Shock absorber stopper					
	Bore size	Stroke	S1	S2	S3	S4	S5	S6	A1	A2	A3	A4	A5	A6
LCG	ø6, ø8	10	○	○	○	○	○	○	-	-	○	○	-	-
		20 or more	○	○	○	○	○	○	○	○	○	○	○	○
	ø12 to ø25	10 to 20	○	○	○	○	○	○	-	-	○	○	-	-
		30 or more	○	○	○	○	○	○	○	○	○	○	○	○

The table above also applies to a combination with option code D (with port on the stopper) or T (steel stopper block (nitriding)).

Code		Description			
A Bore size					
6	ø6				
8	ø8				
12	ø12				
16	ø16				

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

C Switch model No.										
Lead wire straight Type	L-type lead wire Type	Contact	Voltage		Indicator lamp	Lead Line	Bore size			
			AC	DC			ø6	ø8	ø12	ø16
-	F2S*	Proximity		●	1-color LED	2-wire				
-	F3S*			●		3-wire				
F2H*	F2V*			●		2-wire				
F3H*	F3V*			●		3-wire				
F3PH*	F3PV*			●	1-color LED (PNP output) (Made to order)	3-wire	●	●	●	
F2YH*	F2YV*	Reed		●	2-color LED	2-wire				
F3YH*	F3YV*			●		3-wire				
T0H*	T0V*			●	1-color LED	2-wire				
T5H*	T5V*			●	No LED					
T2H*	T2V*		Proximity		●	1-color LED	2-wire			
T3H*	T3V*			●		3-wire				
T2HR3	T2VR3			●	1-color LED Bending resistant lead wire	2-wire				●
T3PH*	T3PV*			●	1-color LED (PNP output)	3-wire				
T2WH*	T2WV*			●		2-wire				
T3WH*	T3WV*		●	2-color LED	3-wire					

* Lead wire length					
Blank	1 m (standard)				●
3	3 m (option)				●
5	5 m (option)				●

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

E Option	
Blank	No option

S Stroke adjusting stopper			
5 mm stroke adjustment on one side		*1, *5, *7, *11	
S1**	Stopper position ① (can be changed to ④)	Stopper installation position	
S2**	Stopper position ② (can be changed to ③)		
S3 **	Stopper position ③ (can be changed to ②)		*12
S4**	Stopper position ④ (can be changed to ①)		*12
S5**	Stopper position ① , ③		
S6**	Stopper position ② , ④		

A Shock absorber stopper *2, *5, *7			
A1**	Stopper position ① (can be changed to ④)	Stopper installation position	
A2**	Stopper position ② (can be changed to ③)		
A3 **	Stopper position ③ (can be changed to ②)		*12
A4**	Stopper position ④ (can be changed to ①)		*12
A5**	Stopper position ① , ③		
A6**	Stopper position ② ④		

** part	
Blank	Port on stopper: without port
D	Port on the stopper:With side and bottom ports *3, *6
Blank	Stopper block material: Steel
T	Stopper block material: steel (nitriding) *6

Plug included	
Blank	No
N	With side piping port plug (not available for ø6)

○: Available - : Not available

LCG-HP1 Series

How to order (ø20, ø25)

Without switch (built-in magnet for switch)

LCG - 20 - 40 — **S5 U** — HP1

With switch (built-in magnet for switch)

LCG - 20 - 40 - T2H* - R - A1DT U — HP1

Model No.

A Tube
Bore size

B Stroke

C Switch model No.

D Switch quantity

F Anti-rust treatment

⚠ Precautions for model No. selection

- *1: To change the adjustable stroke range, use the discrete stroke adjusting stopper on page 38.
 - *2: For the adjustable stroke range with a shock absorber stopper, refer to the stopper dimensions table in "Pneumatic Cylinders II (No. CB-030SA)".
 - *3: For the port position, refer to the stopper dimensions in "Pneumatic Cylinders II (No. CB-030SA)".
 - *4: The standard port positions without stopper are ① and ③ in the figure below.
 - *5: Combination of the stroke adjusting stopper and shock absorber stopper is made to order.
 - *6: Can be selected for the type with stopper only.
 - *7: Refer to the selection table on page 35 for combinations of options.
 - *8: A1**, A2**, A5** and A6** with 20 mm stroke or less are made to order, since adjustment is not possible with the standard stopper.
 - *9: The table is steel. To prevent rust, select "U" for an environment where the temperature and humidity is high or condensation may occur on the product surface.
 - *10: The stroke adjusting stopper for 0.3 MPa and over working pressure is the metal sealing type.
 - *11: When changing the stopper position from the head side to the rod side, the stopper must be purchased separately according to the stroke and adjustable stroke. Refer to "Precautions when purchasing discrete stopper" on page 38.
- A1, A2 and adjustable stroke of 15 mm and 25 mm may not be available depending on the stroke.

[Example of model No.]

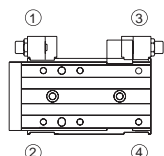
LCG-20-40-T2H-R-A1DT-HP1

Model: Linear slide cylinder Double acting/Single rod LCG

- A** Bore size : ø20
- B** Stroke : 40mm
- C** Switch model No. : Proximity/2-wire
Axial lead wire

- D** Switch quantity : 1 on rod side
- E** Other options : Shock absorber stopper
Stopper position ①
With side and bottom ports
Material, steel (nitriding)

● Stopper position



Consumable parts list

Bore size (mm)	Kit No.	Part name
ø6	LCG-6K-HP1	Rod packing
ø8	LCG-8K-HP1	Metal gasket
ø12	LCG-12K-HP1	Cushion rubber R/H
ø16	LCG-16K-HP1	Piston packing
ø20	LCG-20K-HP1	Cover gasket
ø25	LCG-25K-HP1	Lube keeping structure

Code	Description
A Bore size	
20	ø20
25	ø25
B Stroke (mm)	
10	10
20	20
30	30
40	40
50	50
75	75
100	100
125	125
150	150

C Switch model No.						
Straight lead wire	Lead wireLType	Contact	Voltage		Indicator lamp	Lead wire
			AC	DC		
T0H*	T0V*	Reed	●	●	1-color LED	2-wire
T5H*	T5V*		●	●	No LED	
T2H*	T2V*	Proximity	●	●	1-color LED	2-wire
T3H*	T3V*		●	●	1-color LED (PNP output)	3-wire
T3PH*	T3PV*		●	●	1-color LED (PNP output)	3-wire
T2HR3	T2VR3		●	●	1-color LED Bending resistant lead wire	2-wire
T2WH*	T2WV*		●	●	2-color LED	2-wire
T3WH*	T3WV*		●	●	2-color LED	3-wire

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

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

E Option	
Blank	No option

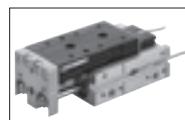
S Stroke adjusting stopper		
5 mm stroke adjustment on one side *1, *5, *7, *10		
S1**	Stopper position ① (can be changed to ④)	Stopper mounting position
S2**	Stopper position ② (can be changed to ③)	
S3**	Stopper position ③ (can be changed to ②)	
S4**	Stopper position ④ (can be changed to ①)	
S5**	Stopper position ①, ③	
S6**	Stopper position ②, ④	

A Shock absorber stopper *2, *5, *7		
A1**	Stopper position ① (can be changed to ④)	Stopper mounting position
A2**	Stopper position ② (can be changed to ③)	
A3**	Stopper position ③ (can be changed to ②)	
A4**	Stopper position ④ (can be changed to ①)	
A5**	Stopper position ①, ③	
A6**	Stopper position ②, ④	

** part	
Blank	Port on stopper: without port
D	Port on the stopper: With side and bottom ports *3, *6
Blank	Stopper block material: Steel
T	Stopper block material: Steel (Nitriding) *6
Plug included	
Blank	No
N	With side piping port plug (not available for ø25)

F Anti-rust treatment	
Blank	No
U	Anti-rust treated product (table/guide) *9

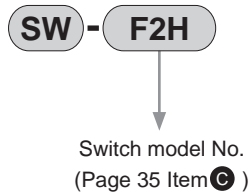
U: Anti-rust treated product (ø20, 25)



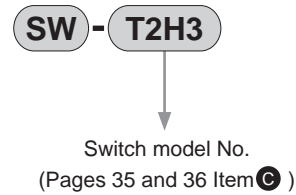
Anti-corrosion treatment is applied to the table surface and rail surface to reduce the occurrence of rust in humid environments such as near ionizers. The table and rail are black.

How to order switch

ø6 to ø12

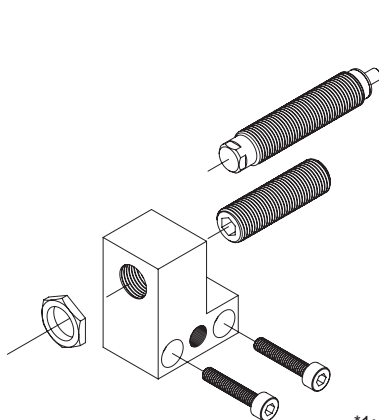


For ø16 to ø25



How to order a stopper set

- Set of a stopper and stroke adjusting stopper or shock absorber stopper
- Use it when changing from the standard to the stroke adjusting stopper or shock absorber stopper.



LCG - 12 - S 2 D - S02

Bore size
(Pages 35 and 36 Item **A**)

A Stopper type	
S	Stroke adjusting stopper
A	Shock absorber stopper
B Stopper mounting position *1	
1	Stopper position ① or ④
2	Stopper position ② or ③
C Port on the stopper	
Blank	Without port
D	With side and bottom ports
D Adjustable stroke *2, *3	
Blank	Adjustable stroke range 5 mm
S02	Adjustable stroke range 15 mm
S03	Adjustable stroke range 25 mm

*1: Stopper mounting position①, ② When installing on (refer to pages 35 and 36), the stroke causes changes in the adjustable stroke; see the following table.

*2: ø6 and ø8 are not available for S03.

*3: Cannot be selected for the shock absorber stopper "A".

Precautions when purchasing the stopper set

Installation position ①, ② (Pages 35 and 36), add the part shown on the right according to the stroke and adjustable stroke.

--: Not applicable

Model No. code	Option code		Discrete stroke adjusting stopper		
			Adjustable stroke (mm)		
LCG Series	Bore size	Stroke	-5	-15	-25
		10	S02	-	-
	ø12 to ø25	20 or more	Blank	S02	-
		10	S03	-	-
		20	S02	S03	-
		30 or more	Blank	S02	S03

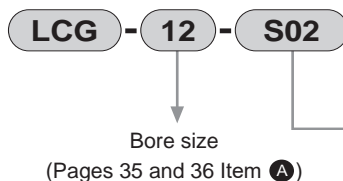
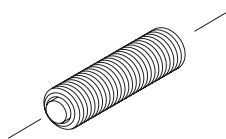
- Stopper set weight (Unit: g)

Stopper port	S1, S2			A1, A2
Port on stopper	Blank, D			
Adjustable stroke	Blank	S02	S03	Blank
ø6	15	18	-	18
ø8	21	25	-	27
ø12	28	31	34	33
ø16	42	47	52	49
ø20	77	85	92	86
ø25	87	94	101	95

SCPD3	Long service life cylinder
CMK2	
SCM	
SSD2	
MDC2	
MSD	
MSDG-L	
SMG	
LCR	
LCG	
STM	
STG	
STR2	
SCPD3	Environment-resistant cylinder
CMK2	
SCM	
SCG	
SSD2	
SMG	
LCR	
STG	
STS	Linear Slide Hand
STL	
LSH	
LSHL	
LSHM	
LST	Low-profile long stroke hand
LSTM	
HMC	Wide Parallel Hand
CKW	Chuck
ABP2	Air Booster
SCPD3	Compatible with rechargeable batteries
CMK2	
SCM	
SSD2	
MSD	
MSDG-L	
SMG	
STG	
STM	
LCR	
LCG	
STR2	
LSH	
LSHL	
SCPD3	Supports food mfg. processes
CMK2	
SCM	
SCG	
SSD2	
STG	

How to order discrete stroke adjusting stopper

- Hexagon socket set screw with urethane
- Use when changing the adjustable stroke range or when using a custom stroke.



A Adjustable stroke range

S01	Single side 5 mm (standard)
S02	Single side 15 mm
S03	Single side 25 mm

● Select S01, S02 or S03 in .

Note: S03 is not available for ø6, ø8. Some models may not be available and adjustable stroke range may differ from the above depending on the Model No.

Precautions when purchasing discrete stopper

Attach the discrete stroke adjusting stopper and the discrete shock absorber stopper.①,② (Pages 35 and 36) When the stopper set is installed in the , note that the combination will be as shown on the right according to the stroke and adjustable stroke.

Model No. code	Option code		Discrete stroke adjusting stopper			Discrete shock absorber stopper
			Adjustable stroke (mm)			
	Bore size	Stroke	-5	-15	-25	
LCG Series -S1, S2, S5, S6 -A1, A2, A5, A6	ø6, ø8	10	S02	-	-	-
		20 or more	S01	S02	-	A01
	ø12 and up ø25	10	S03	-	-	-
		20	S02	S03	-	-
		30 or more	S01	S02	S03	A01

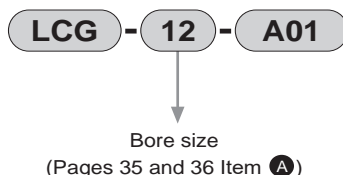
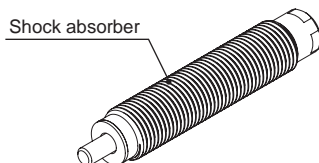
● Discrete stroke adjusting stopper weight

(Unit: g)

Adjustable stroke range	S01	S02	S03
ø 6	6	9	-
ø 8	7	10	-
ø 12	7	11	14
ø 16	11	16	22
ø 20	22	30	37
ø 25	23	30	37

How to order discrete shock absorber stopper

- Shock absorber set
- Use when changing from the stroke adjusting stopper to the shock absorber stopper



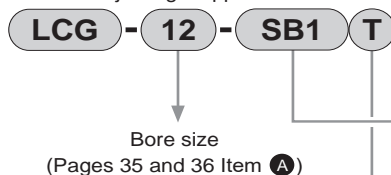
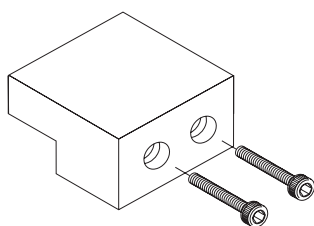
Note: Some models may not be available depending on the specifications. Pages 35 and 36. The adjustable stroke range of the shock absorber stopper is "Pneumatic Cylinders II (No.CB-030SA)".

Applicable shock absorber model No.

Model	Shock absorber model No.	Weight (g)
LCG-6	SKL-0804	9
LCG-8	SKL-0805	12
LCG-12	SKL-0805	12
LCG-16	SKL-1006	19
LCG-20	SKL-1208	31
LCG-25	SKL-1208	31

How to order discrete stopper block

- Use it when changing from the standard to the stroke adjusting stopper or shock absorber stopper.



A Stopper block

SB1	ø6/ø8: For 30 stroke or less ø12 to ø25: For 50 stroke or less
SB2	ø6/ø8: For 40 stroke or more ø12 to ø25: For 75 stroke or more

B Material

Blank	Stopper block material: Steel
T	Stopper block material : Steel (nitriding)

● Discrete stroke adjusting stopper weight

(Unit: g)

Adjustable stroke range	SB1(T)	SB2(T)
ø6	11	21
ø8	14	24
ø12	23	37
ø16	38	72
ø20	60	99
ø25	112	206