



Tie rod cylinder Double acting/Rubber scraper

Environment-resistant cylinder

SCG-G-HP1 Series

● Bore size: $\varnothing 32/\varnothing 40/\varnothing 50/\varnothing 63/\varnothing 80/\varnothing 100$

JIS symbol



Specifications

Item		SCG-G-HP1					
Bore size mm		ø32	ø40	ø50	ø63	ø80	ø100
Actuation		Double acting					
Working fluid		Compressed air					
Max. working pressure MPa		1.0					
Min. working pressure MPa		0.15					
Proof pressure MPa		1.6					
Ambient temperature °C		-10 to 60 (no freezing)					
Port size		Rc1/8	Rc1/4		Rc3/8		Rc1/2
Stroke tolerance mm	With rubber cushion	$^{+1.4}_0$ (up to 1000), $^{+1.8}_0$ (1001 to 1500)					
	With air cushion	$^{+1.0}_0$ (up to 360), $^{+1.4}_0$ (361 to 1000), $^{+1.8}_0$ (1001 to 1500)					
Working piston speed mm/s		50 to 1000(Use the product within the allowable absorbed energy.)					
Cushion		Either air cushion or rubber cushion can be selected					
Effective air cushion length mm		8.6	8.6	13.4	13.4	15.4	15.4
Lubrication		Not required					
Allowable absorbed energy J	With rubber cushion	0.5	0.9	1.6	1.6	3.3	5.8
	With air cushion	2.5	3.7	8.0	14.4	25.4	45.6

Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Available stroke (mm)	Min. stroke (mm)
$\varnothing 32$	25/50/75/100	600	700	1
$\varnothing 40$			800	
$\varnothing 50$	150/200/250		1200	
$\varnothing 63$	300/350/400		1200	
$\varnothing 80$	450/500	700	1400	
$\varnothing 100$		800	1500	

*1: The custom stroke is available in 1 mm increments.

*2: If the max. stroke is exceeded, product specifications may not be met, depending on operating conditions. Contact CKD in this case.

Min. stroke with T0/T5 switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting Position cannot be detected at the rod side stroke end.	Head side trunnion mounting Position cannot be detected at the head side stroke end.
Bore size (mm)	1	2	3	4	1	2	3	4	1	2	3	4	1	1
$\varnothing 32$	9	17	34	51	9	48 (33)	78 (64)	109 (94)	94 (94)	94 (94)	169 (155)	169 (155)	42	42
$\varnothing 40$	9	18	36	54	9	48 (33)	78 (64)	109 (94)	81 (81)	81 (81)	164 (142)	164 (142)	38	38
$\varnothing 50$	9	18	36	54	9	18	36	54	112 (112)	112 (112)	121 (121)	121 (121)	51	53
$\varnothing 63$	10	19	38	57	10	19	38	57	85 (73)	85 (73)	91 (91)	91 (91)	41	42
$\varnothing 80$	10	20	39	59	10	20	39	59	96 (79)	96 (79)	99 (99)	99 (99)	41	47
$\varnothing 100$	10	20	40	60	10	20	40	60	101 (84)	101 (84)	105 (105)	105 (105)	47	53

*1: The values in () are of T*V (L-type lead wire).

*2: When the stroke is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

Min. stroke with T8 switch

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting Position cannot be detected at the rod side stroke end.	Head side trunnion mounting Position cannot be detected at the head side stroke end.
Bore size (mm)	1	2	3	4	1	2	3	4	1	2	3	4	1	1
$\varnothing 32$	9	17	34	51	9	54 (31)	84 (62)	115 (92)	100 (100)	100 (100)	191 (161)	191 (161)	45	45
$\varnothing 40$	9	18	36	54	9	54 (31)	84 (62)	115 (92)	87 (87)	87 (87)	178 (148)	178 (148)	41	41
$\varnothing 50$	9	18	36	54	9	18	36	54	116 (116)	116 (116)	121 (121)	121 (121)	54	55
$\varnothing 63$	10	19	38	57	10	19	38	57	89 (77)	89 (77)	99 (99)	99 (99)	44	44
$\varnothing 80$	10	20	39	59	10	20	39	59	100 (75)	100 (75)	111 (111)	111 (111)	43	49
$\varnothing 100$	10	20	40	60	10	20	40	60	105 (80)	105 (80)	117 (117)	117 (117)	49	55

*1: The values in () are of T*V (L-type lead wire).

*2: When the stroke is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

Min. stroke with T2/T3 switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting Position cannot be detected at the rod side stroke end.	Head side trunnion mounting Position cannot be detected at the head side stroke end.
Bore size (mm)	1	2	3	4	1	2	3	4	1	2	3	4	1	1
ø32	5	10	20	30	5	40 (33)	70 (64)	101 (94)	64 (55)	64 (55)	131 (116)	131 (116)	27	27
ø40	5	10	20	30	5	40 (33)	70 (64)	101 (94)	69 (60)	69 (60)	152 (121)	152 (121)	32	32
ø50	5	10	20	30	5	10	20	30	71 (62)	71 (62)	71 (61)	71 (61)	31	32
ø63	6	11	21	32	6	11	21	32	77 (68)	77 (68)	77 (68)	77 (68)	37	38
ø80	6	11	22	33	6	11	22	33	88 (79)	88 (79)	88 (80)	88 (80)	37	43
ø100	6	11	22	33	6	11	22	33	93 (84)	93 (84)	93 (85)	93 (85)	43	49

*1: The values in () are of T*V (L-type lead wire).

*2: When the stroke is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

Min. stroke with T1/T2YD/T2W/T3W switches

Switch quantity	Different surface mounting				Same surface mounting				Center trunnion mounting				Rod side trunnion mounting Position cannot be detected at the rod side stroke end.	Head side trunnion mounting Position cannot be detected at the head side stroke end.
Bore size (mm)	1	2	3	4	1	2	3	4	1	2	3	4	1	1
ø32	6	11	22	33	6	62 (49)	92 (80)	123 (110)	86 (61)	86 (61)	177 (122)	177 (122)	38	38
ø40	6	11	22	33	6	62 (49)	92 (80)	123 (110)	91 (66)	91 (66)	182 (127)	182 (127)	43	43
ø50	6	12	24	36	6	12	24	36	93 (68)	93 (68)	93 (68)	93 (68)	42	43
ø63	6	12	24	36	6	12	24	36	99 (74)	99 (74)	99 (74)	99 (74)	48	49
ø80	7	13	25	38	7	13	25	38	110 (85)	110 (85)	110 (86)	110 (86)	48	54
ø100	7	13	26	39	7	13	26	39	115 (90)	115 (90)	115 (92)	115 (92)	54	60

*1: The values in () are of T*V (L-type lead wire). T2YD does not have a L-type lead wire (V).

*2: When the stroke is 15 mm or less, the two switches could turn ON at the same time. In this case, adjust switch mounting positions to be as far apart as possible.

How to order mounting brackets

Bore size (mm)	ø32	ø40	ø50	ø63	ø80	ø100
Mounting bracket						
Foot (LB)	SCG-LB-32	SCG-LB-40	SCG-LB-50	SCG-LB-63	SCG-LB-80	SCG-LB-100
Flange (FA) (FB)	SCG-FA-32	SCG-FA-40	SCG-FA-50	SCG-FA-63	SCG-FA-80	SCG-FA-100
Eye bracket (CA)	SCG-CA-32	SCG-CA-40	SCG-CA-50	SCG-CA-63	SCG-CA-80	SCG-CA-100
Clevis bracket (CB)	SCG-CB-32	SCG-CB-40	SCG-CB-50	SCG-CB-63	SCG-CB-80	SCG-CB-100

*1: The foot mounting bracket (LB) is provided as 2 pcs./set.

*2: All mounting brackets have mounting bolts attached.

Material of mounting bracket

Mounting	Material	Remarks
LB	Steel	Nickel plating
FA/FB	Steel	Painted
CA/CB	Cast iron	Painted
TA/TB/TC	Cast iron	Painted

Note: Mounting bracket will be shipped with the product.

Trunnion types (TA, TB, TC) are assembled at shipment.

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

SCG-G-HP1 Series

How to order

Without switch (built-in magnet for switch)

SCG-G - LB - 40 - B - 100 - M I - HP1

With switch (built-in magnet for switch)

SCG-G - LB - 40 - B - 100 - T2H - R - M I - HP1

Model No.

A Mounting
*1

B Bore size

C Port thread

D Cushion

E Stroke

F Switch model No.

G Switch quantity

*3

H Option

I Accessory
*4

Precautions for model No. selection

*1: Mounting bracket will be shipped with the product.
(Trunnion types are assembled at shipment.)

*2: Refer to pages 62 and 63 for the min. stroke with switch.

*3: When selecting TA or TB mounting, the switch quantity is limited to "H" (1 on head side) for TA, and "R" (1 on rod side) for TB.

*4: "I" and "Y" cannot be selected together.

[Example of model No.]

SCG-G-LB-40B-100-T2H-D-MI-HP1

Model: Tie rod cylinder, double acting

- A** Mounting : Axial foot
- B** Bore size : ø40 mm
- C** Port thread : Rc thread
- D** Cushion : With two-sided air cushion
- E** Stroke : 100mm
- F** Switch model No. : Proximity T2H switch, lead wire 1 m
- G** Switch quantity : 2 pcs. included
- H** Option : Piston rod material (Stainless steel)
- I** Accessories : Rod eye (included)

How to order switch

● Switch body + mounting bracket set

SCG - T0H - 40

Switch model No.
(Item **F**)

Bore size
(Item **B**)

● Switch body only

SW - T0H

Switch model No.
(Item **F**)

● Switch mounting bracket set

SCG - T - 40

Mounting bracket

Bore size
(Item **B**)

Code	Description
A Mounting	
00	Basic
LB	Axial foot
FA	Rod side flange
FB	Head side flange
CA	Eye bracket
CB	Clevis bracket (pin and split pin attached)
TA	Rod side trunnion
TB	Head side trunnion
TC	Intermediate trunnion

B Bore size (mm)	
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

C Port thread	
Blank	Rc thread
N	NPT thread (made to order)
G	G thread (made-to-order product)

D Cushion	
B	Two-sided air cushion (basic)
D	Two-sided rubber cushion

Note: The rubber cushioned type has a longer total length than the air cushioned type.

E Stroke (mm)			
Bore size	Stroke *2	Available stroke	Custom stroke
ø32	1 to 600	700	In 1 mm increments
ø40		800	
ø50		1200	
ø63		1400	
ø80	1 to 700	1500	
ø100	1 to 800		

F Switch model No.						
Lead wire	Lead wire	Contact	Voltage		Indicator	Lead wire
Straight	L-shaped		AC	DC		
T0H*	T0V*	Reed	●	●	1-color LED	2-wire
T5H*	T5V*		●	●	No LED	
T8H*	T8V*		●	●	1-color LED	2-wire
T1H*	T1V*		●	●	1-color LED	
T2H*	T2V*	Proximity	●	●	1-color LED	3-wire
T3H*	T3V*		●	●	1-color LED	3-wire
T2HR3	T2VR3		●	●	1-color LED	2-wire
T3PH*	T3PV*		●	●	1-color LED (made to order)	3-wire
T2WH*	T2WV*		●	●	2-color LED	2-wire
T3WH*	T3WV*		●	●	2-color LED	3-wire
T2YD*	-		●	●	2-color LED	2-wire
T2YDT*	-		●	●	2-color LED	2-wire
T2JH*	T2JV*		●	●	1-color LED off-delay	2-wire

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

G Switch quantity	
R	1 on rod side
H	1 on head side
D	2
T	3

H Option	
M	Piston rod material (stainless steel)
P6	Copper and PTFE free

I Accessory	
I	Rod eye
Y	Rod clevis (pin and split pin attached)
B1	Eye bracket
B2	Clevis bracket (pin and split pin attached)
B3	Eye bracket
B4	Trunnion No. 2 bracket (2 pcs./set)

*1: Dimensions in () are for the rubber cushion.
 *2: For HD, RD and protruding dimensions of other switches," Pneumatic Cylinders I (No. CB-029SA)".
 *3: Refer to "Pneumatic Cylinders I (No. CB-029SA)" for the dimensions of accessories.

* Refer to Double acting/Single rod in "Pneumatic Cylinders I" (No. CB-029SA) for dimensions of each mounting type.

Note: Specify the kit No. when placing an order.

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