

Non-rotating Rod: Double Acting

Series CG1K

ø20, ø25, ø32, ø40, ø50, ø63

How to Order

Standard CG1K **L** **N** **25** **100**

With auto switch CDG1K **L** **N** **25** **100** **B53**

With auto switch (magnet)

Double acting Non-rotating rod

Mounting

Stroke (mm)

Auto switch

Number of auto switches

Cushion

Bore size

Applicable Auto Switches/ Refer to p.5.3-2 for further information on auto switch.

Style	Special function	Electrical entry	Indicator	Wiring (Output)	Load voltage		Auto switch model	Lead wire (m)*				Applicable load					
					DC	AC		0.5 (-)	3 (L)	5 (Z)	None (N)						
Reed switch		Grommet	Yes	3 wire (NPN)	—	5V	C76	—	●	●	—	—	IC				
									24V	200V or less	B53	●	●	●	—	—	PLC
											B54	●	●	—	—	—	
											B64	●	●	—	—	—	
											C73	●	●	—	—	—	
									5V, 12V	100V or less	C80	●	●	—	—	IC	
											C73C	●	●	●	—	—	
											C80C	●	●	●	—	IC	
											—	●	●	—	—	—	
									Solid state switch		Grommet	Yes	3 wire (NPN)	5V, 12V	—	H7A1	G59
H7A2	G5P	●	●	○	—	—											
H7B	K59	●	●	○	—	—											
H7C	—	●	●	●	—	—											
24V	5V, 12V	H7NW	G59W	●	●	○	—	IC									
		H7PW	G5PW	●	●	○	—	—									
		H7BW	K59W	●	●	○	—	—									
		H7BA	G5BA	—	●	○	—	—									
5V, 12V	—	—	G5NT	—	●	○	—	IC									
		H7NF	G59F	●	●	○	—	—									
		H7LF	—	●	●	○	—	—									
		—	—	—	—	—	—										

*Lead wire length 0.5m..... — 3m.....L e.g.) C73C 5m.....Z C73CL None.....N e.g.) C73CZ C73CN

*Solid state switches marked with "○" are manufactured upon receipt of order.

Mounting Bracket Part No.

Mounting bracket	Bore size (mm)					
	20	25	32	40	50	63
Axial foot*	CG-L020	CG-L025	CG-L032	CG-L040	CG-L050	CG-L063
Flange	CG-F020	CG-F025	CG-F032	CG-F040	CG-F050	CG-F063
Trunnion pin	CG-T020	CG-T025	CG-T032	CG-T040	CG-T050	CG-T063
Clevis**	CG-D020	CG-D025	CG-D032	CG-D040	CG-D050	CG-D063
Pivot bracket	CG-Q20-24A	CG-Q25-24A	CG-Q32-24A	CG-Q40-24A	CG-Q50-24A	CG-Q63-24A

* Order two foot brackets per a cylinder.
 ** Mounting bolts are attached for foot and flange styles, and clevis pins, snap rings and mounting bolts for the clevis style.

Auto Switch Mounting Bracket Part No.

Auto switch model	Bore size (mm)					
	20	25	32	40	50	63
D-C7-C8	BMA2-020	BMA2-025	BMA2-032	BMA2-040	BMA2-050	BMA2-063
D-H7						
D-B5-B6	BA-01	BA-02	BA-32	BA-04	BA-05	BA-06
D-G5-K5						

Note) A set of following stainless steel mounting screws is attached.
 (A switch mounting band is not attached. Please order the band separately.)
 BBA3: D-B5/B6/G5 types
 BBA4: D-C7/C8/H7 types
 "D-G5BAL" and "D-H7BAL" switches are set on the cylinder with the screws above when shipped.
 When a switch only is shipped, "BBA3" or "BBA4" screws are attached.

Non-rotating Rod: Double Acting *Series CG1K*

High non-rotating accuracy

$\phi 20, \phi 25$ ————— $\pm 1^\circ$
 $\phi 32$ ————— $\pm 0.8^\circ$
 $\phi 40$ to $\phi 63$ ————— $\pm 0.5^\circ$

High speed operation/Long life

Piston speed is between 50 and 500mm/s and long life is expected.

Can operate without lubrication.

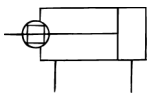
The same installation dimensions as the standard cylinder.

Auto switches can also be mounted.

It can be installed with auto switches to simplify the detection of the stroke position of the cylinder.



JIS symbol



Order Made Made to Order

Refer to p.5.4-1 for made to order products of series CG1K.

With auto switch

Auto switches can be mounted. Mounting position/height is the same as the double acting/single rod style. Refer to p.1.7-13.

Specifications

Bore size (mm)	20	25	32	40	50	63
Action	Double acting/Single rod					
Lubrication	Non-lube					
Fluid	Air					
Proof pressure	1.5MPa					
Max. operating pressure	1.0MPa					
Min. operating pressure	0.05MPa					
Ambient and fluid temperature	Without auto switch: -10°C to $+70^\circ\text{C}$ (No freezing)					
	With auto switch: -10°C to $+60^\circ\text{C}$ (No freezing)					
Piston speed	50 to 500mm/s					
Thread tolerance	JIS class 2					
Stroke tolerance	Up to $600^{+1.4}_0$ mm					
Cushion	Rubber bumper, Air cushion ($\phi 40$ to $\phi 63$ only)					
Rod non-rotating accuracy	$\pm 1^\circ$	$\pm 0.8^\circ$	$\pm 0.5^\circ$	$\pm 0.5^\circ$	$\pm 0.5^\circ$	$\pm 0.5^\circ$
Mounting	Basic, Axial foot, Front flange, Rear flange, Front trunnion, Rear trunnion, Clevis (Used for changing the port location by 90° degrees.)					

Accessories

Mounting		Basic	Axial foot	Front flange	Rear flange	Front trunnion	Rear trunnion	Clevis
Standard	Rod end nut	●	●	●	●	●	●	●
	Clevis pin	—	—	—	—	—	—	●
Option	Single knuckle joint	●	●	●	●	●	●	●
	Double knuckle joint* (with pins)	●	●	●	●	●	●	●
	Pivot bracket	—	—	—	—	●	●	●

* Pins and snap rings for double knuckle joint are attached, not mounted.

Stroke

Bore size (mm)	Standard stroke ⁽¹⁾ (mm)	Long stroke (mm)
20	25, 50, 75, 100, 125, 150, 200	—
25	25, 50, 75, 100, 125, 150, 200, 250, 300	—
32		—
40		301 to 500
50/63		301 to 600



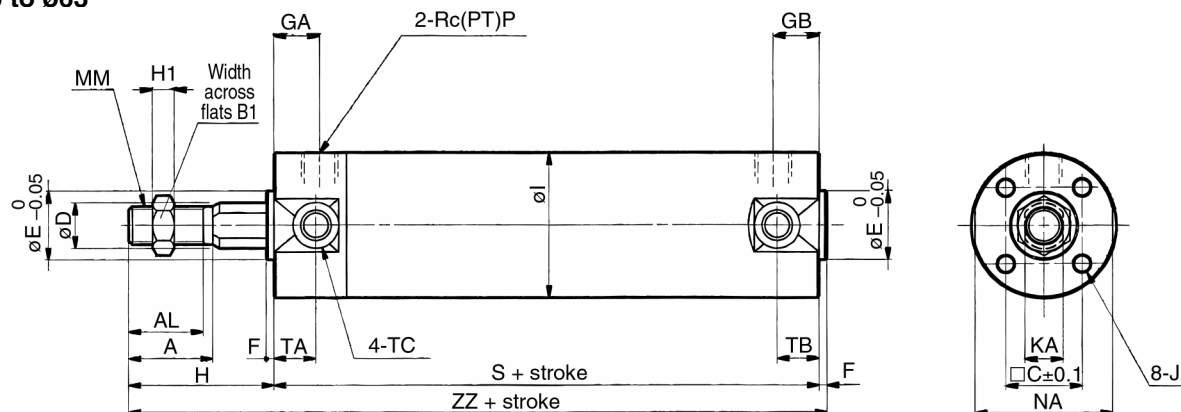
Note 1) Other intermediate strokes can be manufactured upon receipt of order. Spacers are not used for the intermediate strokes.

Note 2) The maximum limit is 1500 stroke, but the products that exceed the standard or the long stroke limit are not guaranteed.

Basic

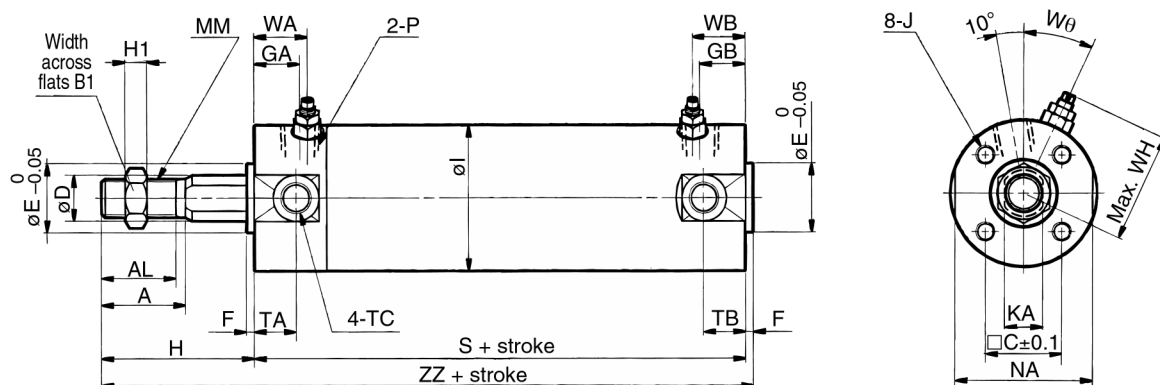
With rubber bumper/CG1KBN

ø20 to ø63



With air cushion/CG1KBA

ø40 to ø63



Bore (mm)	Stroke range (mm)	A	AL	B ₁	C	D	E	F	GA	GB	H	H ₁	I	J	KA	MM	NA	P	S	TA	TB	TC	ZZ
20	Up to 200	18	15.5	13	14	9.2	12	2	12	10	35	5	26	M4 Depth 7	8	M8	24	1/8	69	11	11	M5	106
25	Up to 300	22	19.5	17	16.5	11	14	2	12	10	40	6	31	M5 Depth 7.5	10	M10 X 1.25	29	1/8	69	11	11	M6 X 0.75	111
32	Up to 300	22	19.5	17	20	12	18	2	12	10	40	6	38	M5 Depth 8	10	M10 X 1.25	35.5	1/8	71	11	10	M8 X 1.0	113
40	Up to 300 (500)	30	27	19	26	16	25	2	13	10 (13)	50	8	47	M6 Depth 12	14	M14 X 1.5	44	1/8	78 (87)	12	10 (12)	M10 X 1.25	130 (139)
50	Up to 300 (600)	35	32	27	32	20	30	2	14	12 (14)	58	11	58	M8 Depth 16	18	M18 X 1.5	55	1/4	90 (102)	13	12 (13)	M12 X 1.25	150 (162)
63	Up to 300 (600)	35	32	27	38	20	32	2	14	12 (14)	58	11	72	M10 Depth 16	18	M18 X 1.5	69	1/4	90 (102)	13	12 (13)	M14 X 1.5	150 (162)

Note 1) Dimensions for each mounting bracket are the same as those for CG1 standard or long stroke model. Refer to p.1.7-8 to 1.7-10. Also, refer to p.1.7-12 for auto switch equipped style.

Note 2) (): Long stroke

With air cushion

Bore (mm)	P	WA	WB	WH	Wθ
40	Rc (PT) 1/8	16	15 (16)	33	20°
50	Rc (PT) 1/4	18	17 (18)	40.5	20°
63	Rc (PT) 1/4	18	17 (18)	47.5	20°

Note) (): Long stroke

⚠ Precautions

Be sure to read before handling. Refer to p.0-39 to 0-46 for Safety Instruction and common precautions.

Handling

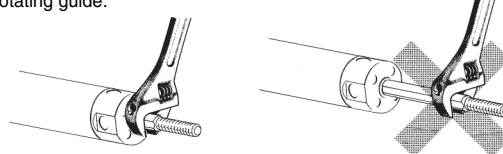
⚠ Cautions

- ① Avoid using the air cylinder in such a way that rotational torque would be applied to the piston rod.
- If rotational torque is applied, the non-rotating guide will become deformed. Refer to the table below for the allowable range of rotational torque.

Allowable rotational torque (Nm)	ø20	ø25/ø32	ø40/ø50/ø63
	0.2	0.25	0.44

- To screw a bracket or a nut onto the piston rod, make sure to retract the piston rod entirely, and place a wrench over the flat portion of the rod that protrudes.

To tighten, take precautions to prevent the tightening torque from being applied to the non-rotating guide.



- ② To replace a rod seal, contact SMC.

A rod seal could lead to an air leak, depending on the position in which it is fitted. Therefore, make sure to contact SMC if a rod seal must be replaced.