

Smooth Cylinder

Series CG1Y

ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Specifications and auto switch information not provided below are the same as those of the low friction, double acting, single rod type of Series CG1□Q.

How to Order

Standard

CG1Y L 25 100

With auto switch

CDG1Y L 25 100 H7BW S

With auto switch
(Built-in magnet)

Mounting

B	Basic
L	Axial foot
F	Front flange
G	Rear flange
U*	Front trunnion
T*	Rear trunnion
D	Clevis

* Not available at ø80 and ø100.
Note) Mounting brackets are not mounted and are supplied loose at the time of shipment.

Bore size

20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Cylinder stroke (mm)

→ Refer to Standard stroke table on page 12.

Port thread type

Nil	Rc
TN	NPT
TF	G

Number of auto switches

Nil	2 pcs.
S	1 pc.
n	n pcs.

Auto switch

Nil	Without auto switch (Built-in magnet)
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* Please select the applicable auto switch model from the table below.

Applicable auto switches

Type	Special function	Electrical entry	Indicator	Wiring (Output)	Load voltage		Auto switch model		Lead wire (m)*				Pre-wired connector	Applicable load			
					DC	AC	Applicable bore size		0.5 (Nil)	3 (L)	5 (Z)	None (N)		IC	Relay, PLC		
							ø20 to ø63	ø20 to ø100									
Reed switch	-	Grommet	Yes	3-wire (Equiv. NPN)	-	5 V	-	C76	-	●	●	-	-	-	-	-	
				2-wire				24 V	12 V	100 V, 200 V	B54		●	●	●	-	-
		Connector	-	-	C73	-	●	●	●	-	-	-	-	-	-	-	
		Grommet			C73C	-	●	●	●	●	-	-	-	-	-	-	
Solid state switch	-	Grommet	Yes	3-wire (NPN)	-	5 V, 12 V	-	H7A1	G59	●	●	○	-	○	-	IC	
				3-wire (PNP)				H7A2	G5P	●	●	○	-	○	-	-	-
		Connector	-	-	2-wire	24 V	12 V	-	H7B	K59	●	●	○	-	○	-	-
		Grommet			H7C				-	●	●	●	●	-	-	-	-
		Grommet	Diagnostic indication (2-color)	Yes	3-wire (NPN)	24 V	5 V, 12 V	-	H7NW	G59W	●	●	○	-	○	-	IC
					3-wire (PNP)				H7PW	G5PW	●	●	○	-	○	-	-
					2-wire				H7BW	K59W	●	●	○	-	○	-	-
					Water resistant (2-color)				H7BA	G5BA	-	●	○	-	○	-	-
					With diagnostic output (2-color)				H7NF	G59F	●	●	○	-	○	-	IC
					Latch with diagnostic output (2-color)				H7LF	-	●	●	○	-	○	-	-

* Lead wire length 0.5 m Nil (Example) C73C
 3 m L (Example) C73CL
 5 m Z (Example) C73CZ
 None N (Example) C73CN

* ○: Manufactured upon receipt of order.

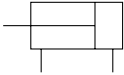
In addition to the models in the above table, there are some other auto switches that are applicable.



Specifications

Bore size (mm)	20	25	32	40	50	63	80	100
Action	Double acting, single rod							
Model	Non-lube							
Fluid	Air							
Proof pressure	1.05 MPa							
Maximum operating pressure	0.7 MPa							
Ambient and fluid temperature	Without auto switch -10 to 70°C (with no freezing)							
	With auto switch -10 to 60°C (with no freezing)							
Operating piston speed	5 to 500 mm/s							
Stroke length tolerance	Up to 300 st + ^{1.4} mm							
Cushion	Rubber bumper							
Mounting	Basic, Axial foot, Front flange, Rear flange, Front trunnion, Rear trunnion, Clevis (in case of 90° change in port location)							
Allowable leakage rate	0.5 l/min (ANR) or less							

JIS symbol



* Front trunnion type and rear trunnion type are not available at ø80 and ø100.

Minimum Operating Pressure

Bore size (mm)	20	25	32	40	50	63	80	100
Minimum operating pressure	0.02				0.01			

Unit: MPa

Replacement Parts: Seal Kits

Bore size (mm)	Kit No.	Contents
20	CG1Y20-PS	
25	CG1Y25-PS	
32	CG1Y32-PS	Piston seal 1 pc.
40	CG1Y40-PS	Rod seal 1 pc.
50	CG1Y50-PS	Tube gasket 2 pcs.
63	CG1Y63-PS	Grease pack (10 g) 1 pc.
80	CG1Y80-PS	
100	CG1Y100-PS	

When only grease for maintenance is necessary, please order by the following part numbers.

Grease pack GR-L-005 (5 g)
GR-L-010 (10 g)
GR-L-150 (150 g)

Standard Stroke Table

Bore size (mm)	Standard stroke (mm) Note 1)
20	25, 50, 75, 100, 125, 150, 200
25, 32, 40, 50, 63, 80, 100	25, 50, 75, 100, 125, 150, 200, 250, 300



Note 1) Intermediate strokes not listed above are also available.

Note 2) Consult SMC for strokes outside the above ranges.

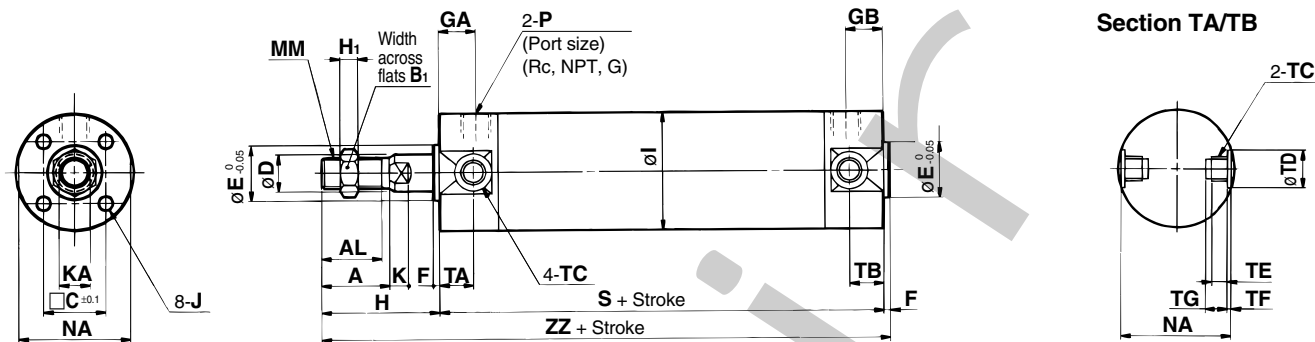
Note 3) As the stroke increases, more sliding resistance may result due to the deflection of the piston rod and other factors. Take measures such as the installation of a guide.

Series CG1Y

Mounting bracket dimensions are the same as those of the low friction, double acting, single rod type of Series CG1□Q.

Dimensions/ø20 to ø100

Basic/CG1YB



Section TA/TB (mm)

Bore size (mm)	TC*	TDH9	TE	TF	TG
20	M5 x 0.8	8 ^{+0.08} ₀	4	0.5	5.5
25	M6 x 0.75	10 ^{+0.08} ₀	5	1	6.5
32	M8 x 1.0	12 ^{+0.08} ₀	5.5	1	7.5
40	M10 x 1.25	14 ^{+0.08} ₀	6	1.25	8.5
50	M12 x 1.25	16 ^{+0.08} ₀	7.5	2	10
63	M14 x 1.5	18 ^{+0.08} ₀	11.5	3	14.5

* Trunnion mounting taps for the width across flats NA are not attached to ø80 and ø100 types.

(mm)

Bore size (mm)	Stroke range (mm)	A	AL	B ₁	C	D	E	F	GA	GB	H	H ₁	I	J	K	KA	MM
20	Up to 200	18	15.5	13	14	8	12	2	12	12	35	5	26	M4 x 0.7 depth 7	5	6	M8 x 1.25
25	Up to 300	22	19.5	17	16.5	10	14	2	12	12	40	6	31	M5 x 0.8 depth 7.5	5.5	8	M10 x 1.25
32	Up to 300	22	19.5	17	20	12	18	2	12	12	40	6	38	M5 x 0.8 depth 8	5.5	10	M10 x 1.25
40	Up to 300	30	27	19	26	16	25	2	13	13	50	8	47	M6 x 1 depth 12	6	14	M14 x 1.5
50	Up to 300	35	32	27	32	20	30	2	14	14	58	11	58	M8 x 1.25 depth 16	7	18	M18 x 1.5
63	Up to 300	35	32	27	38	20	32	2	14	14	58	11	72	M10 x 1.5 depth 16	7	18	M18 x 1.5
80	Up to 300	40	37	32	50	25	40	3	20	20	71	13	89	M10 x 1.5 depth 22	10	22	M22 x 1.5
100	Up to 300	40	37	41	60	30	50	3	20	20	71	16	110	M12 x 1.75 depth 22	10	26	M26 x 1.5

(mm)

Bore size (mm)	Stroke range (mm)	NA	P	S	TA	TB	ZZ
20	Up to 200	24	1/8	77	11	11	114
25	Up to 300	29	1/8	77	11	11	119
32	Up to 300	35.5	1/8	79	11	11	121
40	Up to 300	44	1/8	87	12	12	139
50	Up to 300	55	1/4	102	13	13	162
63	Up to 300	69	1/4	102	13	13	162
80	Up to 300	80	3/8	122	—	—	196
100	Up to 300	100	1/2	122	—	—	196