

# Standard: Double Acting Single Rod

## Series CG1

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

### How to Order

#### Standard

CG1 L N 25 100

#### With auto switch

CDG1 L N 25 100 B53

With auto switch  
(magnet)

#### Mounting

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



\* Not available for bore sizes ø80 and ø100.  
\*\* Mounting brackets are included, not mounted.

#### Cushion

N	Rubber bumper
A	Air cushion

#### Rod boot (at one side)

—	Without rod boot
J	Nylon tarpaulin
K	Heat resistant tarpaulin

\* Foot brackets and front flanges are fitted when rod boots are mounted.

#### Number of auto switches

—	2
S	1
n	n

#### Auto switch

—	Without auto switch (Built-in magnet)
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\* Refer to the table below for selecting applicable auto switches.

#### Bore size

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

#### Cylinder stroke (mm)

Refer to p.1.7-3 for Standard Stroke Table.

### 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	Applicable bore size		0.5 (—)	3 (L)	5 (Z)	None (N)							
							ø20 to ø63	ø20 to ø100											
Reed switch	—	Grommet	Yes	3 wire (NPN)	—	5V	—	C76	—	●	●	—	—	IC	—				
			2 wire	24V	—	—	B53	●	●	●	—	—	Relay PLC						
					200V or less	—	B54	●	●	—	—								
					12V	100V	C73	—	●	●	—			—					
					5V, 12V	100V or less	C80	—	●	●	—			—	IC				
					12V	—	C73C	—	●	●	●			—	—				
	Connector	Yes	5V, 12V	24V or less	C80C	—	●	●	●	●	—	—	IC						
		No	—	—	—	B59W	●	●	—	—	—	—							
		Diagnostic indication (2 color)	Grommet	Yes	—	—	—	B59W	●	●	—	—	—	—					
Solid state switch	—	Grommet	Yes	3 wire (NPN)	24V	5V, 12V	—	H7A1	G59	●	●	○	—	IC	Relay PLC				
			3 wire (PNP)	H7A2				G5P	●	●	○	—							
		Connector	2 wire	12V				H7B	K59	●	●	○	—			—			
			H7C	—				●	●	●	●								
	Diagnostic indication (2 color)	Grommet	Yes	3 wire (NPN)		5V, 12V		H7NW	G59W	●	●	○	—	IC					
				3 wire (PNP)				H7PW	G5PW	●	●	○	—						
				2 wire				12V	H7BW	K59W	●	●	○			—	—		
				H7BA				G5BA	—	●	○	—							
				With timer				3 wire (NPN)	5V, 12V	—	G5NT	—	●	○		—	IC		
				4 wire (NPN)				—	H7NF	G59F	●	●	○	—					
				Diagnostic output (2 color)				Grommet	Yes	—	—	H7LF	—	●		●	○	—	—
				Latch with diagnostic output (2 color)								—	—	—		—	—	—	

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

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

## Water Resistant

CDG1	Mounting	Style	Bore size	<b>R</b>	Stroke	G5BAL	-XC6
	With auto switch (built-in magnet)						Made to order
						Solid state switch (Water resistant/ 2 color indicator)	
					Water resistant		
				R	Seal: NBR (Nitrile rubber)		
				V	Seal: FKM (Fluorine rubber)		

Ideal for use in a machine tool environment exposed to coolant mist. Also suited for use in areas in which water splashes, such as food processing equipment or car washers.

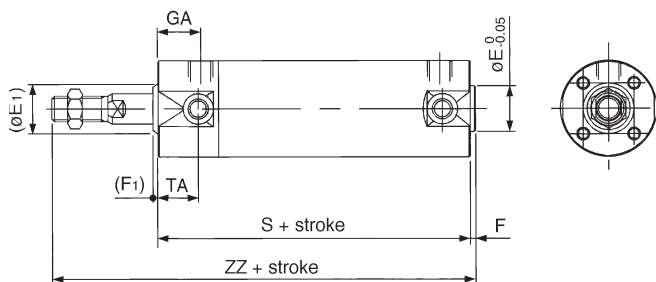
## Specifications

Action	Double acting/Single rod
Bore size (mm)	ø32, ø40, ø50, ø63, ø80, ø100
Cushion	Rubber bumper/Air cushion
Auto switch mounting method	Band mounting
Made to order	Material of the piston rod and rod end nut is stainless steel. (-XC6)

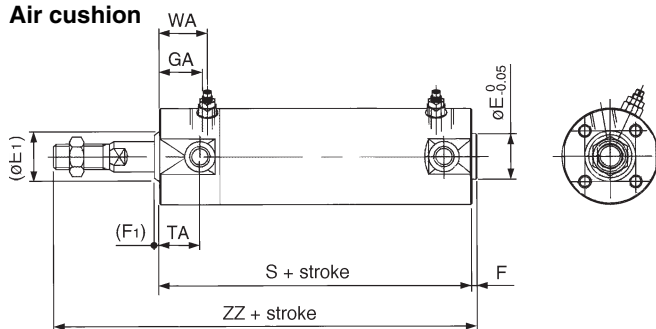
\* Other specifications are the same as the standard model.

## Dimensions

### Rubber bumper



### Air cushion



Bore (mm)	(E1)	E*	(F1)	F*	GA	S	TA	WA	ZZ
32	17	18	2	2	18	77 (85)	17	20	119 (127)
40	21	25	2	2	19	84 (93)	18	21	136 (145)
50	26	30	2	2	21	97 (109)	20	23	157 (169)
63	26	32	2	2	21	97 (109)	20	23	157 (169)
80	32	40	3	3	28	116 (130)	—	30	190 (204)
100	37	50	3	3	29	117 (131)	—	31	191 (205)

\* These dimensions and other dimensions not indicated here are the same as standard.  
Note) ( ): Long stroke

## ⚠ Precautions

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

### Precautions on handling

## ⚠ Warning

- Do not operate the cushion valve in the fully closed or fully opened state.
  - Using it in the fully closed state will cause the cushion seal to be damaged. Using it in the fully opened state will cause the piston rod assembly or the cover to be damaged.
- Operate within the specified cylinder speed.
  - Failure to do so will damage the cylinder and the seals.

## ⚠ Caution

- Do not use the air cylinder as an air-hydro cylinder. This will cause an oil leak.
- Install without twisting the bellows.
  - If the cylinder is installed with its bellows twisted, it could damage the bellows.

### Disassembly/Replacement

## ⚠ Caution

- Do not replace the bushings or the cushion seals.
  - The bushings and the cushion seals are press-fit. To replace them, they must be replaced together with the cover assembly.
- To replace a seal, apply grease to the new seal before installing it.
  - If the cylinder is put into operation without applying grease to the seal, it could cause the seal to wear significantly, leading to premature air leakage.
- Do not replace One-touch fittings.
  - Because pipe fittings are press-fit, they must be replaced together with the cover assembly.
- Those with a bore of ø50 or more cannot be disassembled.
  - When disassembling a cylinder with a bore of ø20 to ø40, use a vise or the like to hold the wrench flats portion of the tube cover or the rod cover on one side, while placing a wrench or an adjustable wrench on the other side to loosen and remove the cover. To replace, tighten it an additional 2... from the installed position. (Those with a bore of ø50 or more cannot be disassembled because they have been tightened with greater torque. If they must be disassembled, contact SMC.)