

# Air Cylinder: Standard Type Double Acting, Single Rod

## CG1 Series

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



### How to Order



CG1 **B** **N** **20** - **100** - **Z** - - -

With auto switch **CDG1** **B** **N** **20** - **100** - **Z** - - - **M9BW** - - -

With auto switch  
(Built-in magnet)

#### Mounting

<b>B</b>	Basic
<b>Z*</b>	Basic (without trunnion mounting female thread)
<b>L</b>	Axial foot
<b>F</b>	Rod flange
<b>G</b>	Head flange
<b>U*</b>	Rod trunnion
<b>T*</b>	Head trunnion
<b>D</b>	Clevis

- \* Not available for ø80 and ø100.
- \* Mounting bracket is shipped together with the product, but not assembled.
- \* The cylinder for F, G, L, D mounting types is Z: Basic (without trunnion mounting female thread).

#### Bore size

<b>20</b>	20 mm
<b>25</b>	25 mm
<b>32</b>	32 mm
<b>40</b>	40 mm
<b>50</b>	50 mm
<b>63</b>	63 mm
<b>80</b>	80 mm
<b>100</b>	100 mm

#### Type

<b>N</b>	Rubber bumper
<b>A</b>	Air cushion

#### Port thread type

Rubber bumper			Air cushion		
<b>Nil</b>	Rc	ø20 to ø100	M5 x 0.8	Rc	ø20, ø25
<b>TN</b>	NPT	ø20 to ø100	NPT*	G*	ø32 to ø100
<b>TF</b>	M5 x 0.8	ø20, ø25	G*	G*	ø32 to ø100
	G	ø32 to ø100			

\* Not available for ø20 and ø25.

#### Pivot bracket

<b>Nil</b>	None
<b>N</b>	Pivot bracket is shipped together with the product, but not assembled

- \* Only for D, U, T mounting types
- \* Pivot bracket is shipped together with the product, but not assembled.

#### Rod end bracket

<b>Nil</b>	None
<b>V</b>	Single knuckle joint
<b>W</b>	Double knuckle joint

- \* No bracket is provided for the female rod end.
- \* Rod end bracket is shipped together with the product, but not assembled.
- \* A knuckle joint pin is not provided with the single knuckle joint.

#### Made to Order

For details, refer to page 293.

#### Number of auto switches

<b>Nil</b>	2 pcs.
<b>S</b>	1 pc.
<b>n</b>	"n" pcs.

#### Auto switch

<b>Nil</b>	Without auto switch
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- \* For applicable auto switches, refer to the table below.

#### Rod end thread

<b>Nil</b>	Male rod end
<b>F</b>	Female rod end

#### Cylinder stroke (mm)

Refer to "Standard Strokes" on page 293.

#### Suffix for cylinder (Rod boot)

<b>Nil</b>	Without rod boot
<b>J</b>	Nylon tarpaulin
<b>K</b>	Heat resistant tarpaulin

- \* In the case of w/rod boot, and a foot bracket or rod flange as a bracket, those parts are to be assembled at the time of shipment.
- \* For female rod end, no rod boot is provided.

\* Refer to "Ordering Example of Cylinder Assembly" on page 294.

### Applicable Auto Switches/Refer to pages 1575 to 1701 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model			Lead wire length (m)					Pre-wired connector	Applicable load										
					DC	AC	Applicable bore size			0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)												
							ø20 to ø63	ø80, ø100	Perpendicular								In-line	In-line								
Solid state auto switch	—	Grommet	—	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	G59	●	●	●	●	○	IC circuit											
				3-wire (PNP)						●	●	●	●	○												
				2-wire						●	●	●	●	○												
		Connector		24 V						5 V, 12 V	—	M9BV	M9B	G5P		●	●	●	●	○	—					
																—	—	—	—	—						
																—	—	—	—	—						
	Diagnostic indication (2-color indicator)	Yes	Grommet	2-wire	3-wire (NPN)	5 V, 12 V	—	M9NVW	M9NW	G59W	●	●	●	●	○	IC circuit										
					3-wire (PNP)						●	●	●	●	○											
					2-wire						●	●	●	●	○											
		Grommet	24 V		5 V, 12 V						—	M9PWW	M9PW	G5PW	●		●	●	●	○	—					
															3-wire (NPN)		●	●	●	●		○				
															3-wire (PNP)		●	●	●	●		○				
Water resistant (2-color indicator)	Yes	Grommet	2-wire	3-wire (NPN)	5 V, 12 V	—	M9NAV <sup>#1</sup>	M9NA <sup>#1</sup>	—	○	●	●	●	○	IC circuit											
				3-wire (PNP)						○	●	●	●	○												
				2-wire						○	●	●	●	○												
	Grommet	24 V		5 V, 12 V						—	M9PAV <sup>#1</sup>	M9PA <sup>#1</sup>	—	M9BAV <sup>#1</sup>		M9BA <sup>#1</sup>	—	○	●	●	●	○	—			
																		4-wire (NPN)	○	●	●	●		○		
																		3-wire (Equiv. to NPN)	○	●	●	●		○		
Reed auto switch	—	Grommet	—	2-wire	24 V	—	A96V	A96	—	●	●	●	●	○	IC circuit											
										Yes	●	●	●	●		○										
										No	●	●	●	●		○										
		Connector								24 V	12 V	—	A93V <sup>#2</sup>	A93		—	A90V	A90	—	●	●	●	●	○	IC circuit	
																				Yes	●	●	●	●		○
																				No	●	●	●	●		○
	Grommet	24 V	12 V	—	—	—	—	—	—	—	●	●	●	●	○	—										
											Yes	●	●	●	●		○									
											No	●	●	●	●		○									
	Diagnostic indicator (2-color indicator)	Grommet	24 V	—	—	—	—	—	—	—	●	●	●	●	○	IC circuit										
											Yes	●	●	●	●		○									
											No	●	●	●	●		○									

- #1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.
- \* A water-resistant type cylinder is recommended for use in an environment which requires water resistance. However, please contact SMC for water-resistant cylinder of ø20 and ø25.
- #2 1 m type lead wire is only applicable to D-A93.
- \* Lead wire length symbols: 0.5 m..... Nil (Example) M9NW 5 m..... Z (Example) M9NWZ 3 m..... L (Example) M9NWL
- 1 m..... M (Example) M9NWM None..... N (Example) H7CN
- \* Solid state auto switches marked with "○" are produced upon receipt of order.
- \* Since there are other applicable auto switches than listed above, refer to page 361 for details.
- \* For details about auto switches with pre-wired connector, refer to pages 1648 and 1649.
- \* The D-A9□□/M9□□□ auto switches are shipped together, (but not assembled). (However, only the auto switch mounting brackets are assembled before shipment.)

