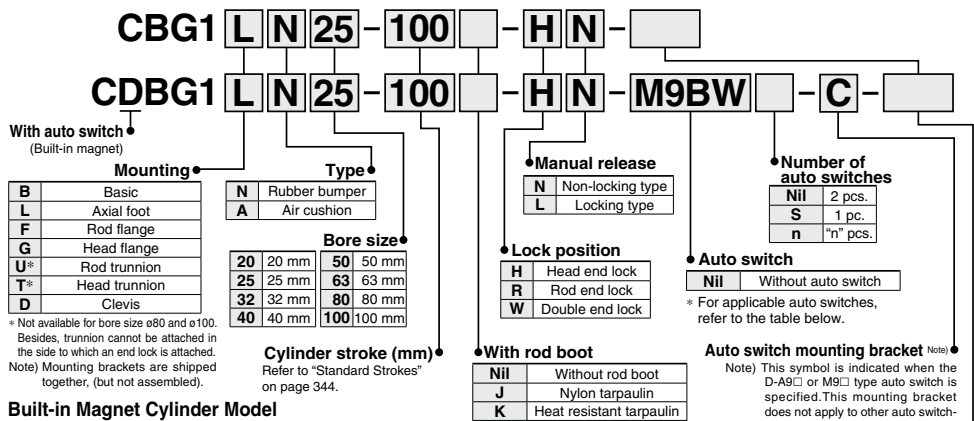


# Air Cylinder: With End Lock

## CBG1 Series

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

### How to Order



### Built-in Magnet Cylinder Model

If a built-in magnet cylinder without an auto switch is required, there is no need to enter the symbol for the auto switch. (Example) CDBG1FA32-100-RL

**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
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	●	●	●	○	○	—	IC circuit	Relay, PLC		
				3-wire (PNP)			M9PV	M9P	●	●	○	—	○					
		Connector		2-wire	12 V		M9BV	M9B	●	●	○	—	○	—				
		3-wire (NPN)		M9NWV	M9NW		●	●	○	—	○							
	Diagnostic indication (2-color indicator)	Grommet		3-wire (PNP)	5 V, 12 V		M9PWV	M9PW	●	●	○	—	○	—	IC circuit			
				2-wire	12 V		M9BWV	M9BW	●	●	○	—	○					
				3-wire (NPN)	5 V, 12 V		M9NAV <sup>*1</sup>	M9NA <sup>*1</sup>	○	○	●	○	○	—	IC circuit			
				3-wire (PNP)	12 V		M9PAV <sup>*1</sup>	M9PA <sup>*1</sup>	○	○	●	○	○					
	Water resistant (2-color indicator)	Grommet		2-wire	12 V		M9BAV <sup>*1</sup>	M9BA <sup>*1</sup>	○	○	●	○	○	—	—			
				4-wire (NPN)	5 V, 12 V		—	G5BA <sup>*1</sup>	●	●	○	—	○					
Reed auto switch	—	Grommet	Yes	3-wire (Equip. to NPN)	5 V		A96V	A96	●	●	●	—	○	—	IC circuit		Relay, PLC	
				100 V	A93V <sup>*2</sup>		A93	●	●	○	—	○						
		Connector		2-wire	12 V		A90V	A90	●	●	○	—	○	—	IC circuit			
		100 V or less		—	B54		●	●	●	—	○							
	Diagnostic indication (2-color indicator)	Grommet		2-wire	24 V		—	B64	●	●	○	—	○	—	IC circuit			
				200 V or less	—		C73C	●	●	●	—	○						
				24 V or less	—		C80C	●	●	●	—	○						
				—	—		B59W	●	●	○	—	○						
				—	—		—	—	—	—	—	—	○					
				—	—		—	—	—	—	—	—	○					

\*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.

Please consult with SMC regarding water resistant types with the above model numbers.

\*2 1 m type lead wire is only applicable to D-A93.

\* Lead wire length symbols: 0.5 m ..... Nil (Example) M9NW  
1 m ..... M (Example) M9NWM  
3 m ..... L (Example) M9NWL

5 m ..... Z (Example) M9NWZ  
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 auto switch mounting brackets are assembled before shipment.)

CJ1

CJP

CJ2

JCM

CM2

CM3

CG1

CG3

JMB

MB

MB1

CA2

CS1

CS2

D-□

-X□

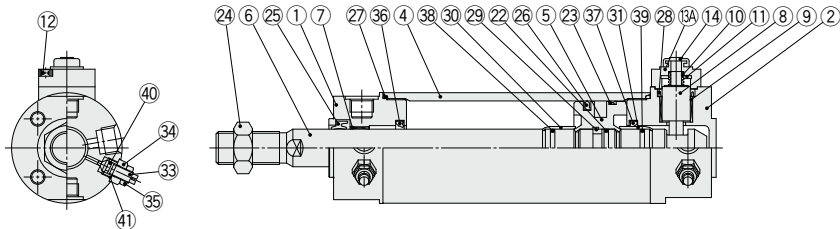
Technical Data

# CBG1 Series

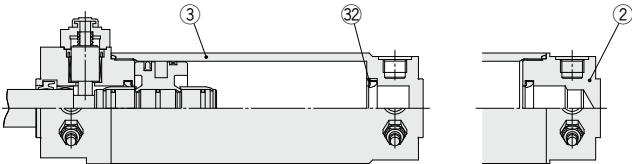
## Construction: With Air Cushion

With air cushion  
Head end lock

Non-locking type manual release: Suffix N



Rod end lock



Long stroke

### Component Parts

No.	Description	Material	Note
1	Rod cover	Aluminum alloy	Hard anodized
2	Head cover	Aluminum alloy	Hard anodized
3	Tube cover	Aluminum alloy	Hard anodized
4	Cylinder tube	Aluminum alloy	Hard anodized
5	Piston	Aluminum alloy	Chromated
6	Piston rod	Carbon steel*	Hard chrome plating*
7	Bushing	Bearing alloy	
8	Lock piston	Carbon steel	Hard chrome plating, Heat treated
9	Lock bushing	Copper alloy	
10	Lock spring	Stainless steel	
11	Bumper	Resin	
12	Hexagon socket head cap screw	Alloy steel	Black zinc chromated
13A	Cap A	Aluminum die-casted	Black painted
13B	Cap B	Carbon steel	Oxide film treated
14	Rubber cap	Synthetic rubber	
15	M/O knob	Zinc die-casted	Black painted
16	M/O bolt	Alloy steel	Black zinc chromated, Red painted
17	M/O spring	Steel wire	Zinc chromated
18	Stopper ring	Carbon steel	Zinc chromated

Note) For cylinders with auto switches, the magnet is installed in the piston.  
\* The material for ø20, ø25 cylinders with auto switches is made of stainless steel.

### Replacement Parts: Seal Kit (With one end lock)

Series	Bore size (mm)	Kit no.	Contents
CBG1□A Air cushion type	20	CBG1A20-PS	Set of the nos. (25, 26, 27, 28, 40, 41) and grease pack
	25	CBG1A25-PS	
	32	CBG1A32-PS	
	40	CBG1A40-PS	

Order seal kit in accordance with the bore size.

Note) As sizes ø50 and larger cannot be disassembled, the seal cannot be replaced.  
\* The seal kit includes a grease pack (10 g). Order with the following part number when only the grease pack is needed.  
Grease pack part number: GR-S-010 (10 g)

No.	Description	Material	Note
22	Piston gasket	NBR	
23	Wear ring	Resin	
24	Rod end nut	Carbon steel	Zinc chromated
25	Rod seal	NBR	
26	Piston seal	NBR	
27	Cylinder tube gasket	NBR	1 pc. when using tube cover
28	Lock piston seal	NBR	2 pcs. for double end lock
29	Piston holder	Resin	ø40 to ø100 only
30	Cushion ring A	Aluminum alloy	Anodized
31	Cushion ring B	Aluminum alloy	Anodized
32	Seal retainer	Rolled steel	Only when using nickel plating, tube cover
33	Cushion valve	Rolled steel	Electroless nickel plating
34	Valve retainer	Rolled steel	Electroless nickel plating
35	Lock nut	Rolled steel	Nickel plating
36	Cushion seal A	Urethane	
37	Cushion seal B	Urethane	ø32 or larger: Same as A
38	Cushion ring gasket A	NBR	
39	Cushion ring gasket B	NBR	ø32 or larger: Same as A
40	Valve seal	NBR	
41	Valve retaining gasket	NBR	

### Replacement Parts: Seal Kit (With double end lock)

Series	Bore size (mm)	Kit no.	Contents
CBG1□A Air cushion type	20	CBG1A20-PS-W	Set of the nos. (25, 26, 27, 28, 40, 41) and grease pack
	25	CBG1A25-PS-W	
	32	CBG1A32-PS-W	
	40	CBG1A40-PS-W	

Order seal kit in accordance with the bore size.

Note) As sizes ø50 and larger cannot be disassembled, the seal cannot be replaced.  
\* The seal kit includes a grease pack (10 g). Order with the following part number when only the grease pack is needed.  
Grease pack part number: GR-S-010 (10 g)