

ISO Standard Hydraulic Cylinder

Series CHSG

16 MPa
 $\varnothing 32, \varnothing 40, \varnothing 50, \varnothing 63, \varnothing 80, \varnothing 100$

How to Order

CH D SG B 40 - 100 - M9BW

Magnet for auto switch

Nil	Without
D	Built-in

Series type

Symbol	Nominal pressure
G	16 MPa

Mounting style

B	Basic
LA	Transaxial foot style
FY	Rod rectangular flange style
FZ	Head rectangular flange style
CA	Single clevis
CB	Double clevis
TA	Rod trunnion
TC	Center trunnion

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Port thread type

Nil	Rc
TN	NPT
TF	GF

Stroke

Refer to the standard stroke table on the next page 262.

Cylinder suffix

Rod end nut	Nil	Without rod end nut
Presence of cushion	A	With rod end nut
N	Without cushion	
R	With front bumper	
H	With rear bumper	

Auto switch

Nil	Without auto switch
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* Select an applicable auto switch model from the table below.

Port position

Symbol	Position	Port and cushion valve location viewed from the side of piston rod end thread
Nil	Port on top, cushion valve on the right	
A	Port on top, cushion valve on the left	
B	Port on top, cushion valve down	
C	Port on the right, cushion valve down	
D	Port on the right, cushion valve on top	
E	Port on the right, cushion valve on the left	

Built-in Magnet Cylinder Model

If a built-in magnet cylinder without auto switch is required, there is no need to enter the symbol for the auto switch.
 (Example) CHDSGB50-100

Note) When more than one symbol is to be specified, indicate them in alphabetical order.

Applicable Auto Switches: Refer to pages 347 to 406 for further details on each auto switch.

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	ø32	ø40 to ø80	ø100	0.5 (Nil)	1 (M)	3 (L)			5 (Z)			
Solid state switch	Diagnostic indication (2-color display)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9N	—	●	—	●	○	○	IC circuit			
				—				F59	●	—	●	○	○					
				3-wire (PNP)	12 V	M9P	—	●	●	●	○	○	—					
				—		F5P	●	—	●	○	○							
	2-wire			—	—	100 V, 200 V	M9B	—	●	●	●	○	○	—				
	—						J59	●	—	●	○	○						
	3-wire (NPN)			24 V	5 V, 12 V	—	J51	—	●	—	●	○	—	IC circuit				
	3-wire (PNP)						M9NW	—	●	●	●	○	○					
	Water resistant (2-color indicator)			2-wire	24 V	12V	—	M9PW	—	●	—	●	○	○	IC circuit			
				3-wire (PNP)				—	F5PW	—	●	—	●	○		○		
		2-wire	24 V	12V	—	M9BW	—	●	—	●	○	○	—					
		3-wire (NPN)				—	J59W	—	●	—	●	○		○				
		3-wire (PNP)	24 V	5 V, 12 V	—	M9NA	—	○	○	○	●	○	○	IC circuit				
		2-wire				M9PA	—	○	○	○	●	○	○					
Diagnostic output (2-color display)	4-wire (NPN)	5 V, 12 V	—	F59F	—	●	—	●	○	○	○	IC circuit						
Reed switch	Diagnostic indication (2-color display)	Grommet	Yes	3-wire (NPN equiv.)	—	5 V	—	Z76	—	●	—	●	—	—	—	—		
				2-wire	24 V	12 V	100 V	—	Z73	—	●	—	●	—	—		—	IC circuit
							100 V or less	—	Z80	—	●	—	●	—	—		—	
				100 V, 200 V	—	A54	—	●	—	●	●	—	—	—				
	200 V or less			—	A64	—	●	—	●	—	—	—						
	Diagnostic output (2-color display)			—	—	—	A59W	—	●	—	●	—	—	—				

* 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

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

* Besides the models in the above table, there are some other auto switches that are applicable. For more information, refer to page 269.

* For details about auto switches with pre-wired connector, refer to pages 389 and 390.

* D-M9□, M9□W, M9□AL, Z7□, Z80 auto switches are shipped together, (not assembled). (Only auto switch mounting brackets are packed assembled.)

Note 1) Refer to table 1 for manufacturability.
 Note 2) Diagrams illustrate the view from the rod on the left side of the cylinder dimensions.
 Note 3) For mounting types FY, FZ, or TA, indicate port position with the symbol B.

Table 1 Manufacturability Check List by Mounting Type and Port Position

Mounting bracket	B	LA	FY	CA	TA	TC
Port position	B	LA	FY	CA	TA	TC
Nil	○	○	○	○	○	○
A	○	○	○	○	○	○
B	○	○	○	○	○	○
C	Note)	—	○	○	—	○
D	Note)	—	○	○	—	○
E	Note)	—	○	○	—	○

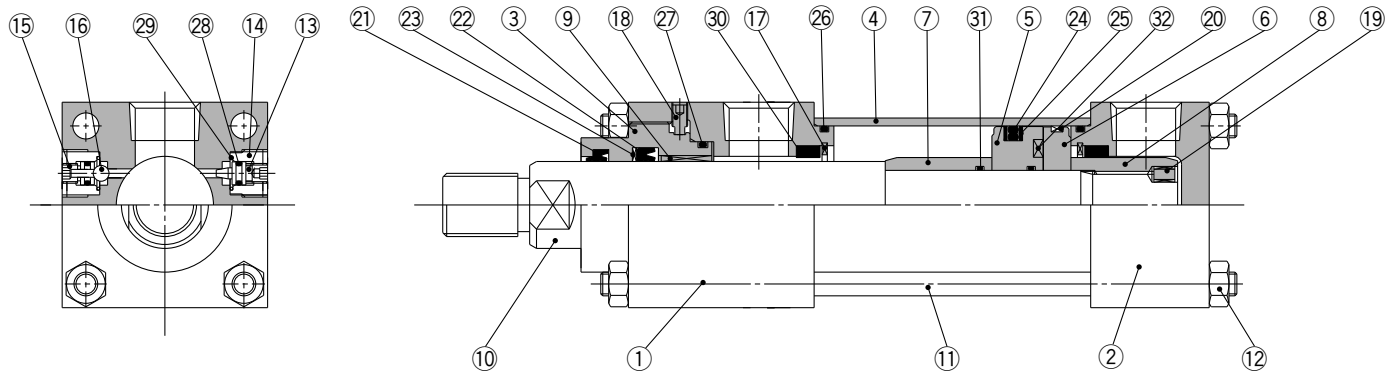
○: Standard product ○: Made to order

—: Not available due to size limitation.

Note) Each of C, D, E is same as the Nil, A, B just turned.

Construction

CH□SGB



Parts List

No.	Description	Material
1	Rod cover	Carbon steel
2	Head cover	Carbon steel
3	Seal holder	Carbon steel
4	Cylinder tube	Stainless steel
5	Piston	Stainless steel
6	Magnet plate	Stainless steel
7	Cushion ring	Carbon steel
8	Cushion ring nut	Carbon steel
9	Bushing	Copper alloy
10	Piston rod	Carbon steel
11	Tie-rod	Chromium molybdenum steel
12	Tie-rod nut	Carbon steel
13	Cushion valve	Alloy steel
14	Valve holder	Carbon steel
15	Air release valve	Alloy steel
16	Check ball	Bearing steel

No.	Description	Material
17	Retaining ring	Carbon tool steel
18	Set screw	Alloy steel
19	Pin	Stainless steel
20	Wear ring	Resin
21	Scraper	NBR
22	Rod seal	NBR
23	Back-up ring	Resin
24	Piston seal	NBR
25	Back-up ring	Resin
26	Cylinder tube gasket	NBR
27	Holder gasket	NBR
28	Valve seal	NBR
29	Valve holder gasket	NBR
30	Cushion seal	—
31	Piston gasket	NBR
32	Magnet	—

Replacement Parts: Seal Kit

Bore size (mm)	Seal kit no.
32	CHSG32-PS
40	CHSG40-PS
50	CHSG50-PS
63	CHSG63-PS
80	CHSG80-PS
100	CHSG100-PS

* Seal kit consists of items 21 to 26 and 30, and can be ordered by using the seal kit number for each bore size.

CHQ

CHK□

CHN

CHM

CHS□

CH2□

CHA

Related Equipment

D-□