

ISO Standards

Air Cylinder: Standard Double Acting with End of Stroke Cushioning

Series CP96

ø32, ø40, ø50, ø63, ø80, ø100, ø125

How to order

CP96S **B** **32** - **100** **J** **W** - **□**

With auto switch **CP96SD** **B** **32** - **100** **J** **W** - **M9BW** **S** - **□**

With auto switch
(Built-in magnet)

Mounting

B	Basic
L	Axial foot
F	Rod flange
G	Head flange
C	Single clevis
D	Double clevis

* Mounting brackets are shipped together, (but not assembled).

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm
125	125 mm

Cylinder stroke (mm)
Refer to "Standard Strokes" on page 44.

Rod boot

Nil	Without rod boot
J	Nylon tarpaulin (one side)
JJ	Nylon tarpaulin (both sides)
K	Heat resistant tarpaulin (one side)
KK	Heat resistant tarpaulin (both sides)

Auto switch

Nil	Without auto switch
------------	---------------------

* For applicable auto switches, refer to the table below.

Number of auto switches

Nil	2 pcs.
S	1 pc.
3	3 pcs.
n	"n" pcs.

Made to Order
Refer to page 44 for details.

Auto switch

Nil	Without auto switch
------------	---------------------

* For applicable auto switches, refer to the table below.

Rod

Nil	Single rod
W	Double rod

Applicable Auto Switches/Refer to the Best Pneumatics No. 2 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		0.5 (Nil)	1 (M)	3 (L)	5 (Z)						
Solid state auto switch	—	Grommet	No	3-wire (NPN)	24 V	5 V, 12 V	—	M9N	●	●	●	○	○	IC	Relay, PLC		
				3-wire (PNP)				M9P	●	●	●	○	○				
				2-wire				M9B	●	●	●	○	○				
	Diagnostic indication (2-color indication)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NW	●	●	●	○	○	IC	Relay, PLC		
				3-wire (PNP)				M9PW	●	●	●	○	○				
				2-wire				M9BW	●	●	●	○	○				
	Water resistant (2-color indication)	Grommet	No	3-wire (NPN)	24 V	5 V, 12 V	—	M9NA*1	○	○	●	○	○	IC	Relay, PLC		
				3-wire (PNP)				M9PA*1	○	○	●	○	○				
				2-wire				M9BA*1	○	○	●	○	○				
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	24 V	5 V	100 V or less	A96	●	—	●	—	—	IC	—		
				2-wire				A93	●	●	●	●	—			—	Relay, PLC
								A90	●	—	●	—	—			—	

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

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

* Since there are other applicable auto switches than listed above, refer to the Best Pneumatics No. 2 for details.

* For details about auto switches with pre-wired connector, refer to the Best Pneumatics No. 2.

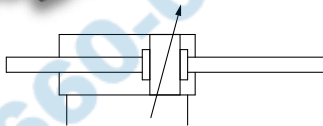
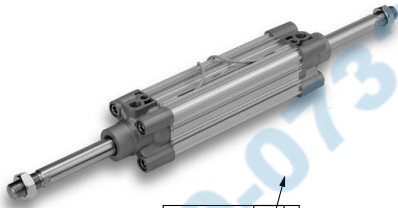
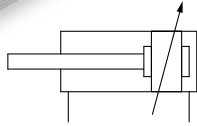
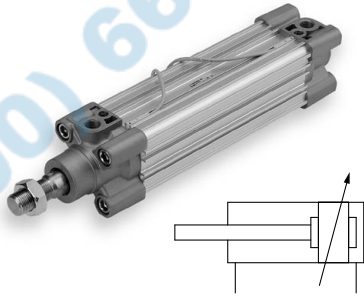
* The D-A9□/M9□/M9□W/M9□A auto switches are shipped together, (but not assembled).

(However, only the auto switch mounting brackets are assembled before shipment.)

Note) D-Y59A, Y69A, Y7P, Y7□W, Z7□, Z80 type cannot be mounted on the CP96 series.

Moreover, the D-M9□□ and A9□ auto switches cannot be mounted on square groove of the CP96 series.

Series CP96



Minimum Stroke for Auto Switch Mounting

Refer to "Minimum Stroke for Auto Switch Mounting" on page 54.



Made to Order
(For details, refer to pages 84 to 91.)

Symbol	Specifications
-XA□	Change of rod end shape
-XB6	Heat resistant cylinder (150°C)
-XC4	With heavy duty scraper
-XC7	Tie-rod, cushion valve, tie-rod nut, etc. made of stainless steel
-XC10	Dual stroke cylinder/Double rod type
-XC11	Dual stroke cylinder/Single rod type
-XC22	Fluororubber seal
-XC35	With coil scraper
-XC68	Made of stainless steel (with hard chrome plated piston rod)

⚠ Caution

Be sure to read before handling.

Refer to page 105 for Safety Instructions and "Handling Precautions for SMC Products" (M-E03-3) for Actuator and Auto Switch Precautions.

Specifications

Bore size (mm)	32	40	50	63	80	100	125
Action	Double acting						
Fluid	Air						
Proof pressure	1.5 MPa						
Max. operating pressure	1.0 MPa						
Min. operating pressure	0.05 MPa						
Ambient and fluid temperature	Without auto switch: -20 to 70°C (No freezing) With auto switch : -10 to 60°C (No freezing)						
Lubrication	Not required (Non-lube)						
Operating piston speed	50 to 1000 mm/s					50 to 700 mm/s	
Allowable stroke tolerance	Up to 250 st: $+1.0$, 251 to 1000 st: $+1.4$, 1001 to 1500 st: $+1.8$, 1501 to 2000 st: $+2.2$						
Cushion	Air cushion						
Port size	G 1/8	G 1/4	G 1/4	G 3/8	G 3/8	G 1/2	G 1/2
Mounting	Basic, Axial foot, Rod flange, Head flange, Single clevis, Double clevis, Center trunnion						

Standard Strokes

Bore size (mm)	Standard stroke (mm)	Max. stroke ^{Note)}
32	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500	2000
40	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500	2000
50	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500, 600	2000
63	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500, 600	2000
80	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500, 600, 700, 800	2000
100	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500, 600, 700, 800	2000
125	—	2000

Intermediate strokes are available.

Note) Please consult with SMC for longer strokes.

Accessories

Mounting		Basic	Foot	Rod flange	Head flange	Single clevis	Double clevis	Center trunnion
Standard	Rod end nut	●	●	●	●	●	●	●
	Clevis pin	—	—	—	—	—	●	—
Option	Piston rod ball joint	●	●	●	●	●	●	●
	Rod clevis	●	●	●	●	●	●	●
	Rod boot	●	●	●	●	●	●	●

* Do not use a piston rod ball joint (or floating joint) together with a single clevis with a ball joint (or clevis pivot bracket with a ball joint).