

# Clamp Cylinder with Magnetic Field Resistant Auto Switch (Rod Mounting Type)

## CKG1/CKP1 Series

ø40, ø50, ø63

RoHS

### How to Order

Built-in standard magnet

CKG1 A 50 - 100 Y Z - P3DWASC

Built-in strong magnet

CKP1 A 50 - 100 Y Z - P79WSE

Clevis width

A	16.5 mm
B	19.5 mm
C	12.5 mm

Bore size

40	40 mm
50	50 mm
63	63 mm

Thread type

Nil	Rc1/4
TN	NPT1/4
TF	G1/4

Cylinder stroke (mm)

40	50, 75, 100, 125, 150
50	50, 75, 100, 125, 150, 200
63	50, 75, 100, 125, 150, 200

Number of auto switches

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

Made to Order

Refer to page 422 for details.

Auto switch

Nil	Without auto switch (built-in magnet) Without switch mounting rod
P	Without auto switch (built-in magnet) With switch mounting rod

\* Select applicable auto switch models from the table below.

Option

Nil	None
B	Limit switch mounting base
D	Dog fitting <sup>Note 1)</sup>
L	Foot
K <sup>Note 2)</sup>	Pedestal (for 75, 100, 150 strokes only)

Note 1) When the dog fitting is selected, choose the rod end bracket IA or YA (M6 with tap).

Note 2) Only available for clevis width A (16.5 mm)

### Built-in Standard (Strong) Magnet Cylinder Part No.

- 1) Built-in standard (strong) magnet without auto switch, without switch mounting rod

Symbol for the auto switch type is "Nil" as shown below.

CKG1: (Example) CKG1A50-50YZ

CKP1: (Example) CKP1A50-50YZ

- 2) Built-in standard (strong) magnet without auto switch, with switch mounting rod

Symbol for the auto switch type is "P" as shown below.

CKG1: (Example) CKG1A50-50YZ-P

CKP1: (Example) CKP1A50-50YZ-P

\* The auto switch mounting bracket is not included.

End bracket

Nil	None
I	Single knuckle joint (M6 without tap)
IA	Single knuckle joint (M6 with tap)
Y	Double knuckle joint (M6 without tap)
YA	Double knuckle joint (M6 with tap)

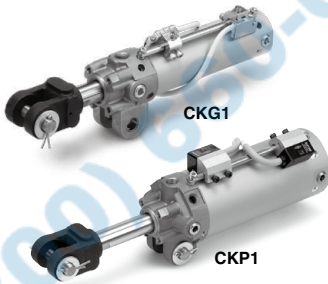
Note) A knuckle pin, cotter pins and flat washers are provided as a standard for Y and YA.

### Applicable Magnetic Field Resistant Auto Switches (Refer to pages 941 to 1067 for detailed auto switch specifications.)

Applicable cylinder series	Type	Auto switch model	Applicable magnetic field	Electrical entry	Indicator light	Wiring (Pin no. in use)	Load voltage	Lead wire length	Applicable load
CKG1	Solid state auto switch	D-P3DWASC	AC magnetic field (Single-phase AC welding magnetic field)	Pre-wired connector	2-color indicator	2-wire (3-4)	24 VDC	0.3 m	Relay, PLC
		D-P3DWASE				2-wire (1-4)		0.5 m	
		D-P3DWA		Grommet		2-wire		3 m	
		D-P3DWAL						5 m	
		D-P3DWAZ		Pre-wired connector		2-wire (3-4)		0.3 m	
		D-P4DWSC				2-wire (1-4)		3 m	
		D-P4DWSE		Grommet		2-wire		5 m	
		D-P4DWL						5 m	
CKP1	Reed auto switch	D-P79WSE	DC/AC magnetic field	Pre-wired connector	2-color indicator	2-wire (1-4)	24 VDC	0.3 m	
		D-P74L		Grommet	1-color indicator	2-wire	24 VDC	3 m	
		D-P74Z					100 VAC	5 m	

Note 1) Refer to page 433 when ordering the auto switch mounting bracket or switch mounting rod assembly.

Note 2) For the D-P3DWA□, the auto switch and auto switch mounting bracket are packed together, (but not assembled).



## Specifications

Bore size (mm)	40	50	63
Fluid	Air		
Proof pressure	1.5 MPa		
Maximum operating pressure	1.0 MPa		
Minimum operating pressure	0.05 MPa		
Ambient and fluid temperature	-10°C to 60°C		
Piston speed	50 to 500 mm/s		
Cushion	Unclamped side (head end): With air cushion		
Speed controller	Equipped on both ends		
Lubrication	Non-lube		
Stroke length tolerance	$+1.0$ 0		
Mounting <sup>(Note)</sup>	Double clevis		

Note) A clevis pin, cotter pins, flat washers are equipped as a standard.

Clevis width	16.5 mm	CKG1A/CKP1A
	19.5 mm	CKG1B/CKP1B
	12.5 mm	CKG1C/CKP1C

## Standard Stroke

Bore size (mm)	Standard stroke (mm)
40	50, 75, 100, 125, 150
50, 63	50, 75, 100, 125, 150, 200

## End Bracket/Options

Symbol	Description	Part no.		
		CKG1A/CKP1A	CKG1B/CKP1B	CKG1C/CKP1C
I	Single knuckle joint	M6 without tap	CKB-104	
IA		M6 with tap	CKB-1A04	
Y	Double knuckle joint (A knuckle pin, cotter pins, flat washers are equipped as a standard.)	M6 without tap	CKA-Y04	CKB-Y04
YA		M6 with tap	CKA-YA04	CKB-YA04

\* For details about dimensions, refer to pages 430 and 431.

## Weight (Basic weight includes the switch mounting rod. At 0 stroke)

				Unit: kg
	Bore size (mm)	40	50	63
CKG1□ cylinder	Basic weight	0.70	0.92	1.12
	Additional weight per 25 mm of stroke	0.11	0.12	0.14
CKP1□ cylinder	Basic weight	0.72	0.98	1.28
	Additional weight per 25 mm of stroke	0.11	0.12	0.14
Single knuckle joint		0.20		
Double knuckle joint (A knuckle pin, cotter pins, flat washers are equipped as a standard.)		0.34		

Calculation

Example) CKG1□50-100YZ-P

$$\begin{aligned}
 &\bullet \text{ Basic weight} \dots\dots\dots 0.92 (\phi 50) \\
 &\bullet \text{ Additional weight} \dots\dots\dots 0.12/25 \text{ mm} \\
 &\bullet \text{ Cylinder stroke} \dots\dots\dots 100 \text{ mm} \\
 &\bullet \text{ Double knuckle joint} \dots\dots\dots 0.34 (Y) \\
 &\hline
 &0.92 + 0.12 \times 100/25 + 0.34 = 1.74 \text{ kg}
 \end{aligned}$$

## Theoretical Output

							Unit: N
Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm <sup>2</sup> )	Operating pressure (MPa)			
				0.3	0.4	0.5	0.6
40	20	OUT	1260	378	504	630	756
		IN	943	283	377	472	566
50	20	OUT	1960	588	784	980	1180
		IN	1650	495	660	825	990
63	20	OUT	3120	934	1250	1560	1870
		IN	2800	840	1120	1400	1680

Refer to pages 432 to 434 for cylinders with auto switches.
<ul style="list-style-type: none"> <li>Minimum stroke for auto switch mounting</li> <li>Auto switch proper mounting position (detection at stroke end) and its mounting height</li> <li>Operating range</li> <li>Auto switch mounting bracket/Part no.</li> </ul>



**Made to Order**  
(Refer to page 435 for details.)

Symbol	Specifications
-X1515	With air cushion on both ends

### Made to Order

[Click here for details](#)

Symbol	Specifications
-XC86*	Spatter resistant coil scraper, Lube-retainer, Grease for welding (Rod parts: Stainless steel 304)
-XC89*	Spatter resistant coil scraper, Lube-retainer, Grease for welding (Rod parts: S45C)
-XC91*	Spatter resistant coil scraper, Grease for welding (Rod parts: S45C)

\* Not available for the CKP1 series.