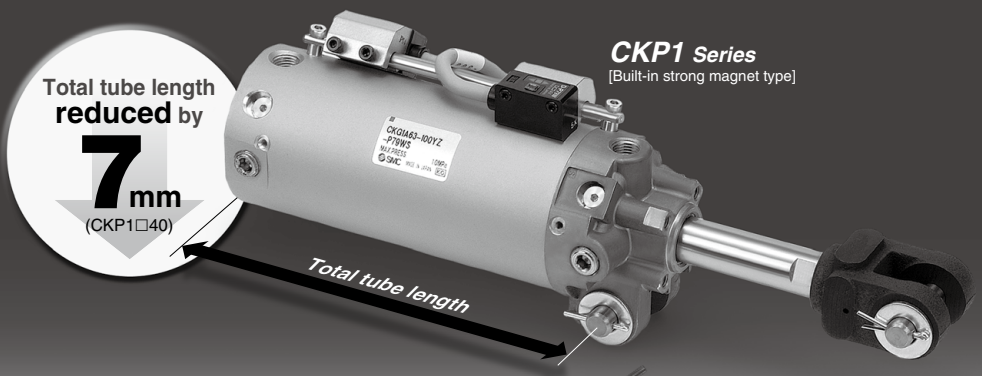
Clamp Cylinder

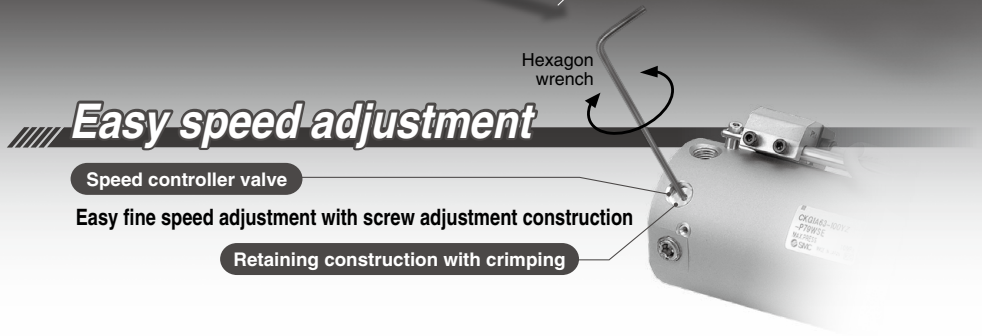
CK□1 Series

ø40, ø50, ø63

Total tube length reduced

RoHS



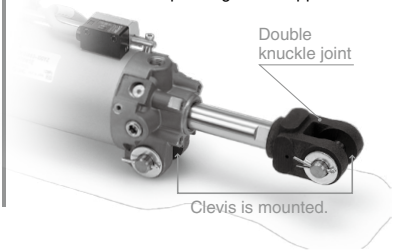


Clevis width

12.5 mm

16.5 mm/19.5 mm

Possible to select depending on the application

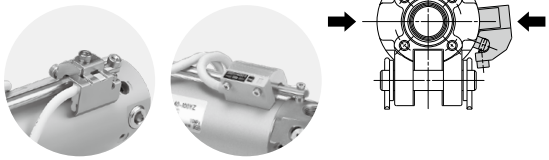


Magnetic field resistant auto switches

Mountable in 3 directions

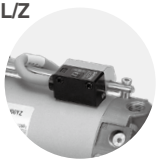
[CKG1 series/Built-in standard magnet type]

D-P3DWA, D-P4DW



[CKP1 series/Built-in strong magnet type]

D-P79WSE, D-P74L/Z



Total tube length reduced

The total length has been reduced by modifying the internal design.

CKP1 series (mm)

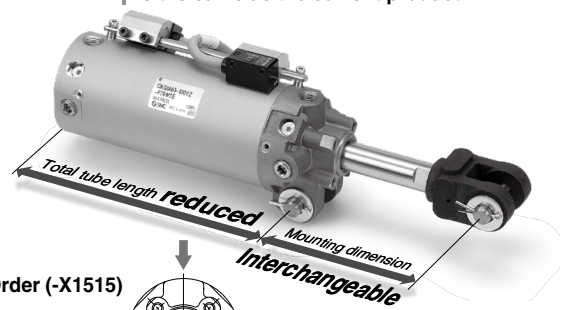
Bore size (mm)	CKP1	Shortened dimensions	Current model
40	58	7	65
50	56	2	58
63	56	2	58

CKG1 series (mm)

Bore size (mm)	CKG1	Shortened dimensions	Current model
40	53	2	55
50	56	2	58
63	56	2	58

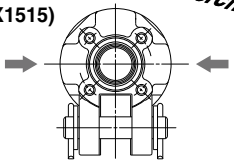
Mounting dimensions are the same as the current product.

The dimension from the body to the work piece is the same as the current product.



With air cushion

Unclamped side (Head end)···Standard
Air cushion on both ends·····Made to Order (-X1515)

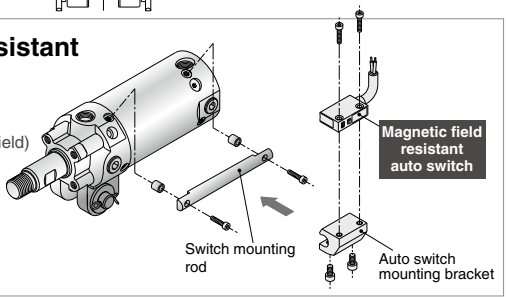


Piping ports are located on three surfaces.

Possible to mount magnetic field resistant auto switch in 3 directions

[CKG1 series/Built-in standard magnet type]
D-P3DWASC, D-P3DWASE, D-P3DWA/L/Z (AC magnetic field)
D-P4DWSC, D-P4DWSE, D-P4DWL/Z (AC magnetic field)

[CKP1 series/Built-in strong magnet type]
D-P79WSE, D-P74L/Z (DC/AC magnetic field)



CK1 Series Variations

Series			Bore size (mm) 25	32	40	50	63	Stroke (mm)	Clevis width (mm)	Page
Clamp cylinder (Rod mounting type) 	Built-in standard magnet type	CKG1			●	●	●	50, 75, 100, 125, 150, 200* *Except ø40	12.5, 16.5, 19.5	P.421
	Built-in strong magnet type	CKP1			●	●	●			
Clamp cylinder (Band mounting type) 	Without magnet	CK1			●	●	●			P.426
	Built-in standard magnet type	CKG1			●	●	●			
Clamp cylinder/ Slim type (Rod mounting type) 	Built-in standard magnet type	CKG□-X2095	●	●	●			50, 75, 100, 125, 150	9, 12.5	P.473
	Built-in strong magnet type	CKP□-X2095	●	●	●					
Clamp cylinder with lock/Slim type (Rod mounting type) 	Built-in standard magnet type	CLKG□-X2095	●	●	●					
	Built-in strong magnet type	CLKP□-X2095	●	●	●					
Clamp cylinder with lock 	Built-in standard magnet type	CLK2G□		*1	●	●	●	50, 75, 100, 125, 150	12.5, 16.5, 19.5	P.445
	Built-in strong magnet type	CLK2P□			●	●	●			

*1) Clevis width is 12 mm.

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.

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.

Option

Nil	None
B	Limit switch mounting base
D	Dog fitting Note 1)
L	Foot
K Note 2)	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

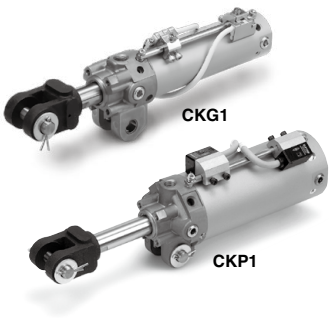
2) Built-in standard (strong) magnet without auto switch, with switch mounting rod

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.

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)			
		D-P3DWA		Grommet		2-wire		0.5 m	
		D-P3DWAL						3 m	
		D-P3DWAZ						5 m	
		D-P4DWSC		Pre-wired connector		2-wire (3–4)		0.3 m	
		D-P4DWSE				2-wire (1–4)			
		D-P4DWL		Grommet		2-wire		3 m	
		D-P4DWZ						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 Note)	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-I04		
IA		M6 with tap	CKB-IA04		
Y	Double knuckle joint (A knuckle pin, cotter pins, flat washers are equipped as a standard.)	M6 without tap	CKA-Y04	CKB-Y04	CKC-Y04
YA		M6 with tap	CKA-YA04	CKB-YA04	CKC-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**
- Basic weight ····· 0.92 (ø50)
- Additional weight ····· 0.12/25 mm
- Cylinder stroke ····· 100 mm
- Double knuckle joint ····· 0.34 (Y)

0.92 + 0.12 x 100/25 + 0.34 = 1.74 kg

Theoretical Output

Unit: N

Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm^2)	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.

- Minimum stroke for auto switch mounting
- Auto switch proper mounting position (detection at stroke end) and its mounting height
- Operating range
- Auto switch mounting bracket/Part no.

Made to Order

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

Symbol	Specifications
-X1515	With air cushion on both ends

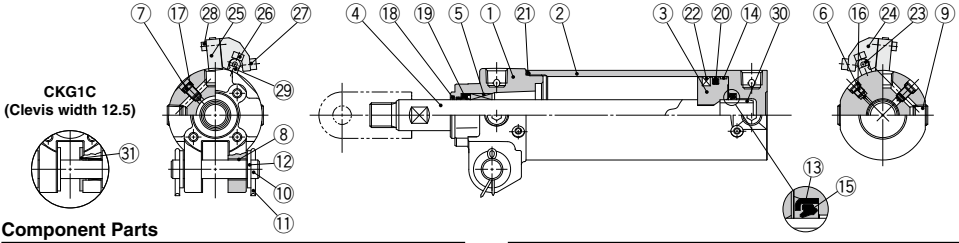
Made to Order
Click here for details

Symbol	Specifications
-XC88∗	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.

Construction

CKG1□40, 50, 63 Rod mounting type

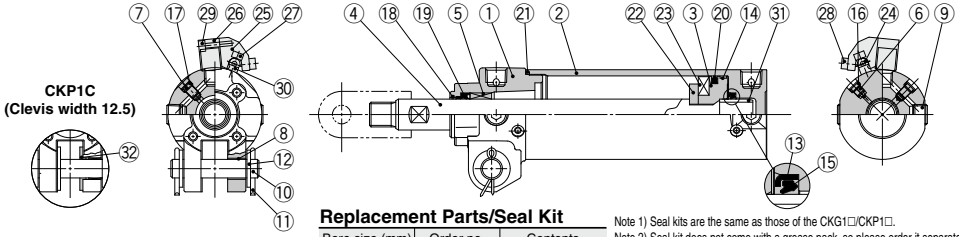


Component Parts

No.	Description	Material	Q'ty	Note
1	**Rod cover**	Aluminum alloy	1	Chromated
2	**Tube cover**	Aluminum alloy	1	Hard anodized
3	**Piston**	Aluminum alloy	1	Chromated
4	**Piston rod**	Carbon steel	1	Hard chrome plating
5	**Bushing**	Bearing alloy	1	
6	**Cushion valve**	Steel wire	1	Black zinc chromated
7	**Speed controller valve**	Steel wire	2	Nickel plating
8	**Clevis bushing**	Oil-impregnated sintered alloy	2	
9	**Hexagon socket head plug**	Carbon steel	4	Rc1/4
10	**Pin**	Carbon steel	1	
11	**Cotter pin**	Low carbon steel wire rod	2	
12	**Flat washer**	Rolled steel	2	
13	**Cushion seal retainer**	Rolled steel	1	Zinc chromated
14	**Wear ring**	Resin	1	
15	**Cushion seal**	Urethane	1	
16	**Cushion valve seal**	NBR	1	
17	**Speed controller valve seal**	NBR	2	

No.	Description	Material	Q'ty	Note
18	**Coil scraper**	Phosphor bronze	1	
19	**Rod seal**	NBR	1	
20	**Piston seal**	NBR	1	
21	**Tube gasket**	NBR	1	
22	**Magnet**	—	1	
23	**Switch mounting rod**	Carbon steel	1	Zinc chromated
24	**Auto switch mounting bracket**	Aluminum alloy	—	
25	**Magnetic field resistant auto switch**	—	—	
26	**Hexagon socket head cap screw**	Steel wire	2	M4 x 0.7 x 14 L
27	**Hexagon socket head cap screw**	Steel wire	2 pcs. per switch	M4 x 0.7 x 8 L
28	**Hexagon socket head cap screw**	Steel wire	2 pcs. per switch	M3 x 0.5 x 14 L
29	**Switch mounting spacer**	Aluminum alloy	2	
30	**Cushion ring**	Aluminum alloy	1	Anodized
31	**Spacer**	Bearing alloy	2	CKG1C only

CKP1□40, 50, 63 Rod mounting type



Replacement Parts/Seal Kit

Bore size (mm)	Order no.	Contents
40	CK1A40-PS	Set of nos. above ⑲, ⑳, ㉑.

Note 1) Seal kits are the same as those of the CKG1□/CKP1□.
Note 2) Seal kit does not come with a grease pack, so please order it separately.
Grease pack part number: GR-S-010
(compatible with all sizes)
Note 3) Cylinders with ø50 or larger bore sizes are tightened with a large tightening torque and cannot be disassembled. Please contact SMC when disassemble is required.

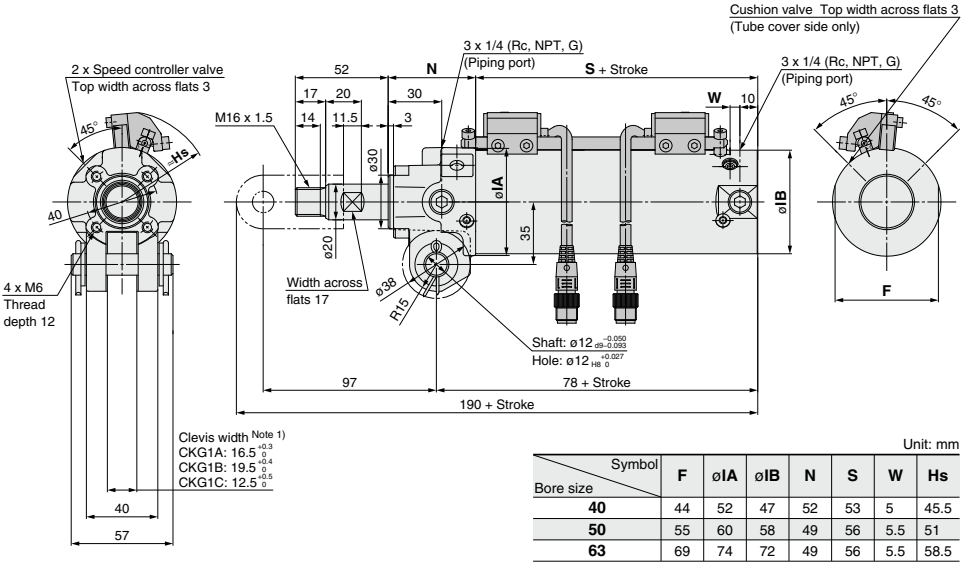
Component Parts

No.	Description	Material	Q'ty	Note
1	**Rod cover**	Aluminum alloy	1	Chromated
2	**Tube cover**	Aluminum alloy	1	Hard anodized
3	**Piston**	Aluminum alloy	1	Chromated
4	**Piston rod**	Carbon steel	1	Hard chrome plating
5	**Bushing**	Bearing alloy	1	
6	**Cushion valve**	Steel wire	1	Black zinc chromated
7	**Speed controller valve**	Steel wire	2	Nickel plating
8	**Clevis bushing**	Oil-impregnated sintered alloy	2	
9	**Hexagon socket head plug**	Carbon steel	4	Rc1/4
10	**Pin**	Carbon steel	1	
11	**Cotter pin**	Low carbon steel wire rod	2	
12	**Flat washer**	Rolled steel	2	
13	**Cushion seal retainer**	Rolled steel	1	Zinc chromated
14	**Wear ring**	Resin	1	
15	**Cushion seal**	Urethane	1	
16	**Cushion valve seal**	NBR	1	
17	**Speed controller valve seal**	NBR	2	

No.	Description	Material	Q'ty	Note
18	**Coil scraper**	Phosphor bronze	1	
19	**Rod seal**	NBR	1	
20	**Piston seal**	NBR	1	
21	**Tube gasket**	NBR	1	
22	**Magnet holder**	Aluminum alloy	1	
23	**Magnet**	—	1	
24	**Switch mounting rod**	Carbon steel	1	Zinc chromated
25	**Auto switch mounting bracket**	Aluminum alloy	—	
26	**Magnetic field resistant auto switch**	—	—	
27	**Hexagon socket head cap screw**	Steel wire	2	M4 x 0.7 x 14 L
28	**Hexagon socket head cap screw**	Steel wire	2 pcs. per switch	M4 x 0.7 x 8 L
29	**Hexagon socket head cap screw**	Steel wire	2 pcs. per switch	M3 x 0.5 x 16 L
30	**Switch mounting spacer**	Aluminum alloy	2	
31	**Cushion ring**	Aluminum alloy	1	Anodized
32	**Spacer**	Bearing alloy	2	CKP1C only

Dimensions

CKG1□40, 50, 63 Rod mounting type

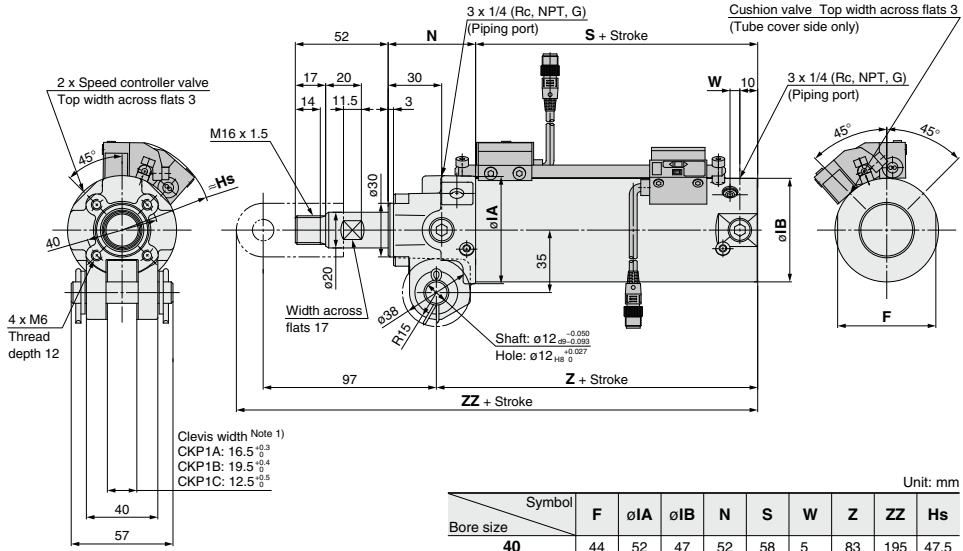


Unit: mm

Bore size \ Symbol	F	øIA	øIB	N	S	W	Hs
40	44	52	47	52	53	5	45.5
50	55	60	58	49	56	5.5	51
63	69	74	72	49	56	5.5	58.5

Note 1) Indicates the point where the clevis is narrowest (on the tube side)

CKP1□40, 50, 63 Rod mounting type



Unit: mm

Bore size \ Symbol	F	øIA	øIB	N	S	W	Z	ZZ	Hs
40	44	52	47	52	58	5	83	195	47.5
50	55	60	58	49	56	5.5	78	190	51
63	69	74	72	49	56	5.5	78	190	57.5

Note 1) Indicates the point where the clevis is narrowest (on the tube side)

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

CK1/CKG1 Series

ø40, ø50, ø63

RoHS

How to Order

CK1 A 50 □ – 100 Y □ Z – □

CKG1 A 50 □ – 100 Y □ Z – □

For how to order auto switch/switch mounting bracket, refer to the below.

Built-in magnet for auto switch

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

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.

Option

Nil	None
B	Limit switch mounting base
D	Dog fitting Note 1)
L	Foot
K Note 2)	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)

Made to Order
Refer to page 428 for details.

Magnetic Field Resistant Auto Switch D-P4DW□/Band Mounting Compliant

Band mounting of the magnetic field resistant auto switch (D-P4DW□) to the CKG1□ series is possible by ordering the switch mounting bracket and the auto switch individually.

How to Order

Please order the switch mounting bracket, auto switch and clamp cylinder individually. Refer to the table below for auto switch mounting bracket part numbers.

Part no.	Applicable auto switch model	Applicable clamp cylinder
BA8-040	D-P4DWSC	**CKG1□40**
BA8-050	D-P4DWSE	**CKG1□50**
BA8-063	D-P4DWL/Z	**CKG1□63**

Ordering Example

Example case ① Cylinder: CKG1A50-50YZ 1
Example case ② Magnetic field resistant auto switch: D-P4DWSC 2
Example case ③ Switch mounting bracket: BA8-050 2

Note 1) Please order the same quantity for the switch mounting bracket and the magnetic field resistant auto switch respectively.
Note 2) Band mounting for the magnetic field resistant auto switches D-P79WS□, D-P74□ is not applicable.

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**	**P4DWSC**	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
		P4DWSE				2-wire (1–4)			
		P4DWL		Grommet		2-wire		3 m	
		P4DWZ						5 m	

Clamp Cylinder with Standard Auto Switch (Band Mounting/Rod Mounting Type)

CKG1 Series

ø40, ø50, ø63

RoHS

How to Order

CK G 1 A 50 □ – 100 Y □ Z – M9BW □ – □ – □

Built-in magnet for auto switch

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

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.

Option

Nil	None
B	Limit switch mounting base
D	Dog fitting Note 1)
L	Foot
K Note 2)	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)

Auto switch

Nil	Without auto switch (Built-in magnet)

∗ For applicable auto switches, refer to the table below.
∗ Auto switches are shipped together, (but not assembled).

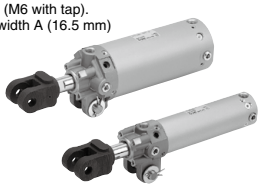
Number of auto switches

Nil	2 pcs.
S	1 pc.

Auto switch mounting type

Nil	Band mounting
P	Rod mounting

Made to Order
Refer to page 428 for details.



Standard Auto Switches ⚠**Standard auto switches cannot be used under a strong magnetic field.**

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage DC	Load voltage AC	Auto switch model	Lead wire length [m] 0.5 (Nil)	1 (M)	3 (L)	5 (Z)	Pre-wired connector	Applicable load	
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	**M9N**	●	●	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)			**M9P**	●	●	●	○	○		
				2-wire	12 V		**M9B**	●	●	●	○	○	—	
	Diagnostic indication (2-color indicator)			3-wire (NPN)	5 V, 12 V		**M9NW**	●	●	●	○	○	IC circuit	
				3-wire (PNP)			**M9PW**	●	●	●	○	○		
				2-wire	12 V		**M9BW**	●	●	●	○	○	—	
	Water resistant (2-color indicator)			3-wire (NPN)	5 V, 12 V		**M9NA**	○	○	●	○	○	IC circuit	
				3-wire (PNP)			**M9PA**	○	○	●	○	○		
				2-wire	12 V		**M9BA**	○	○	●	○	○	—	
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	**A96**	●	—	●	—	—	IC circuit	—
			No	2-wire	24 V	12 V	100 V	**A93**	●	●	●	●	—	—	Relay, PLC
						5 V, 12 V	100 V or less	**A90**	●	—	●	—	—	IC circuit	

∗ Solid state auto switches marked with "○" are produced upon receipt of order.
∗ Auto switches and mounting brackets are shipped together, (but not assembled).

∗ Lead wire length symbols: 0.5 m·····Nil (Example) M9NWV
1 m·····M (Example) M9NWVM
3 m·····L (Example) M9NWVL
5 m·····Z (Example) M9NWVZ

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	Without auto switch: –10°C to 70°C With auto switch: –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 Note)	Double clevis		

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

Clevis width	16.5 mm	CK1A/CKG1A
	19.5 mm	CK1B/CKG1B
	12.5 mm	CK1C/CKG1C

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.		
			CK1A/CKG1A	CK1B/CKG1B	CK1C/CKG1C
I	Single knuckle joint	M6 without tap	CKB-I04		
IA		M6 with tap	CKB-IA04		
Y	Double knuckle joint (A knuckle pin, cotter pins, flat washers are equipped as a standard.)	M6 without tap	CKA-Y04	CKB-Y04	CKC-Y04
YA		M6 with tap	CKA-YA04	CKB-YA04	CKC-YA04

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

Weight

Unit: kg

Bore size (mm)		40	50	63
Cylinder	Basic weight	0.68	0.90	1.10
	Additional weight per 25 mm of stroke	0.10	0.11	0.13
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**

- Basic weight ·····0.90 (ø50)
- Additional weight ·····0.11/25 mm
- Cylinder stroke·····100 mm
- Double knuckle joint ·····0.34 (Y)

0.90 + 0.11 x 100/25 + 0.34 = 1.68 kg

Theoretical Output

Unit: N

Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm^2)	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.

- Minimum stroke for auto switch mounting
- Auto switch proper mounting position (detection at stroke end) and its mounting height
- Operating range
- Auto switch mounting bracket/Part no.

Made to Order

Made to Order

(Refer to page 435 for details.)

Symbol	Specifications
-X1515	With air cushion on both ends

Made to Order

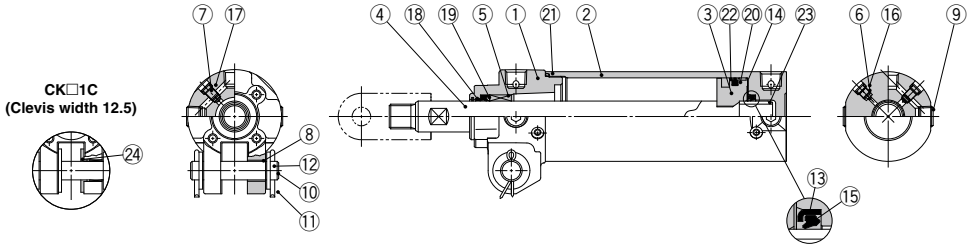
Click here for details

Symbol	Specifications
-XC88∗	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 CK1 and CKG1 with the magnetic field resistant auto switch.

Construction

CK□1□40, 50, 63 Band mounting type



Component Parts

No.	Description	Material	Q'ty	Note
1	**Rod cover**	Aluminum alloy	1	Chromated
2	**Tube cover**	Aluminum alloy	1	Hard anodized
3	**Piston**	Aluminum alloy	1	Chromated
4	**Piston rod**	Carbon steel	1	Hard chrome plating
5	**Bushing**	Bearing alloy	1	
6	**Cushion valve**	Steel wire	1	Black zinc chromated
7	**Speed controller valve**	Steel wire	2	Nickel plating
8	**Clevis bushing**	Oil-impregnated sintered alloy	2	
9	**Hexagon socket head plug**	Carbon steel	4	Rc1/4
10	**Pin**	Carbon steel	1	
11	**Cotter pin**	Low carbon steel wire rod	2	
12	**Flat washer**	Rolled steel	2	
13	**Cushion seal retainer**	Rolled steel	1	Zinc chromated
14	**Wear ring**	Resin	1	
15	**Cushion seal**	Urethane	1	
16	**Cushion valve seal**	NBR	1	
17	**Speed controller valve seal**	NBR	2	
18	**Coil scraper**	Phosphor bronze	1	
19	**Rod seal**	NBR	1	
20	**Piston seal**	NBR	1	
21	**Tube gasket**	NBR	1	
22	**Magnet**	—	—	For the CKG1
23	**Cushion ring**	Aluminum alloy	1	Anodized
24	**Spacer**	Bearing alloy	2	CK□1C only

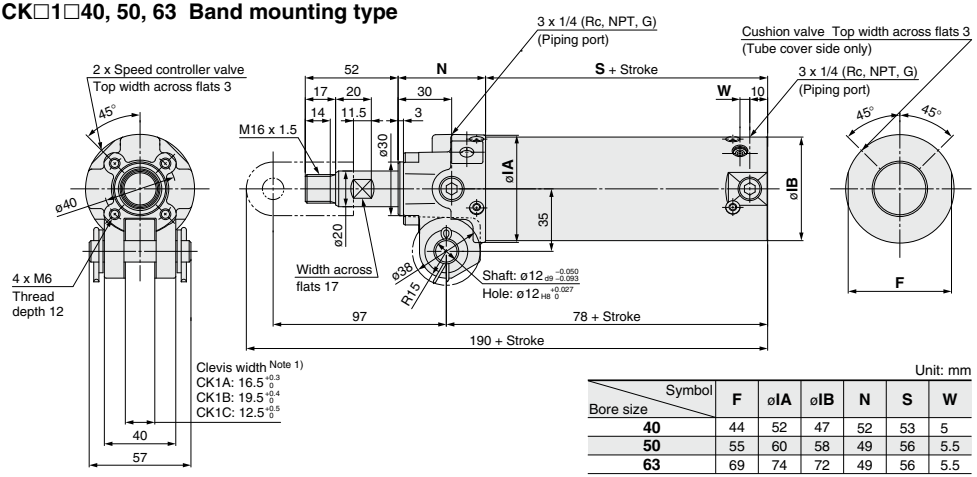
Replacement Parts/Seal Kit

Bore size (mm)	Order no.	Contents
40	CK1A40-PS	Set of nos. above ⑲, ⑳, ㉑.

Note 1) Seal kit does not come with a grease pack, so please order it separately.
Grease pack part number: GR-S-010 (compatible with all sizes)
Note 2) Cylinders with ø50 or larger bore sizes are tightened with a large tightening torque and cannot be disassembled. Please contact SMC when disassemble is required.

Dimensions

CK□1□40, 50, 63 Band mounting type



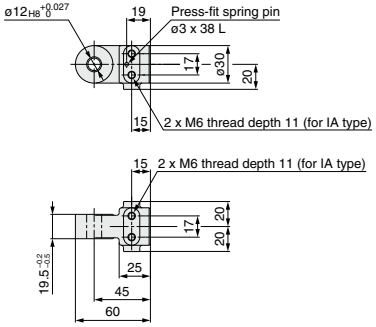
Unit: mm

Bore size \ Symbol	F	øIA	øIB	N	S	W
40	44	52	47	52	53	5
50	55	60	58	49	56	5.5
63	69	74	72	49	56	5.5

Note 1) Indicates the point where the clevis is narrowest (on the tube side)

End Bracket

Single Knuckle Joint

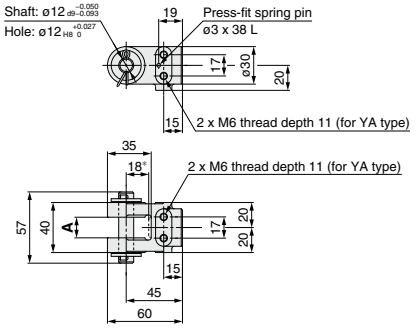


Material: Cast iron

Part no.	End bracket symbol	Applicable clamp cylinder
CKB-I04	I (M6 without tap)	CK□1A series
CKB-IA04	IA (M6 with tap)	CK□1B series

Note 1) A spring pin is attached to the single knuckle joint as a standard.
Note 2) The current model is equivalent to the component part number CKB-IA04 (end bracket symbol IA).

Double Knuckle Joint



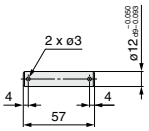
Material: Cast iron

Unit: mm

Part no.	End bracket symbol	A	Applicable clamp cylinder
CKA-Y04	Y (M6 without tap)	16.5 +0.3 0	CK□1A series
CKA-YA04	YA (M6 with tap)		
CKB-Y04	Y (M6 without tap)	19.5 +0.4 0	CK□1B series
CKB-YA04	YA (M6 with tap)		
CKC-Y04	Y (M6 without tap)	12.5 +0.3 0	CK□1C series
CKC-YA04	YA (M6 with tap)		

Note 1) A knuckle pin, cotter pins, flat washers and a spring pin are attached to the double knuckle joint as a standard.
Note 2) The current model is equivalent to the component part number CKA-YA04, CKB-YA04 (end bracket symbol YA).
Note 3) The dimension with * shows the value when mounted on the piston rod.

Pin



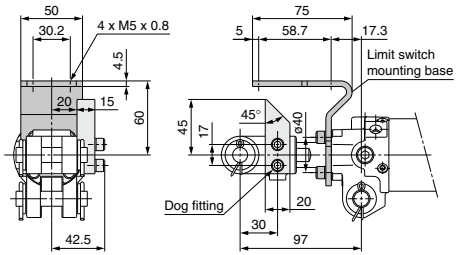
Material: Carbon steel

Part no.	Usage
CK-P04	Knuckle pin Clevis pin

Note) Cotter pins and flat washers are attached to the pin as a standard.

Options

Limit Switch Mounting Base/Dog Fitting



Material: Rolled steel

Part no.	Option symbol	Name	Applicable clamp cylinder
CK-B04	**B**	Limit switch mounting base	CK□1A series
CK-D04	**D**	Dog fitting	CK□1B series

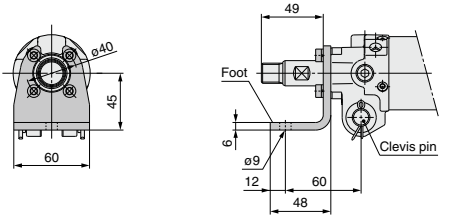
Note 1) Limit switch mounting base and dog fitting can be repositioned by removing the hexagon socket head cap screw.

Note 2) When ordering the limit switch mounting base and the dog fitting individually, mounting bolts (hexagon socket head cap screw) and spring washers will be attached as a standard.

⚠

When you attach a dog fitting, be sure to use a knuckle joint, M6 with tap (end bracket symbol IA or YA).
The dog fitting cannot be attached to the knuckle joint, M6 without tap (end bracket symbol I or Y).

Foot



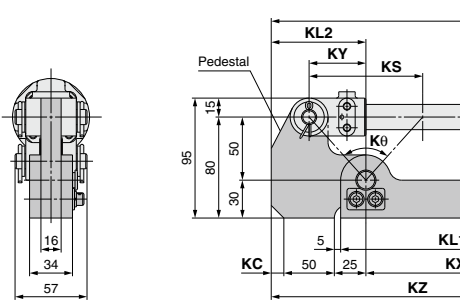
Material: Rolled steel

Part no.	Option symbol	Applicable clamp cylinder
CK-L04	**L**	CK□1A series CK□1B series

Note 1) A mounting bolt (hexagon socket head cap screw) and a spring washer will be attached as a standard for the foot bracket.

Note 2) When mounting the cylinder, use both the foot and clevis pin. Please avoid using the foot by itself as this may result in damage.

Pedestal



Material: Rolled steel

Unit: mm

Part no.	Option symbol	KL1	KL2	KS	KX	KY	KZ	Kθ	KC	KZZ				Applicable clamp cylinder
										CKG□40	CKP□40	CKG□50 CKP□50	CKG□63 CKP□63	
CKA-K075	**K**	167	75	70	132	35	222	69° 59'	0	360	365	360		CK□1A40-75YZ CK□1A50-75YZ CK□1A63-75YZ
CKA-K100		177	75	90	142	45	232	83° 58'	0	395				CK□1A40-100YZ CK□1A50-100YZ CK□1A63-100YZ
CKA-K150		202	85	140	167	70	267	108° 55'	10	480				CK□1A40-150YZ CK□1A50-150YZ CK□1A63-150YZ

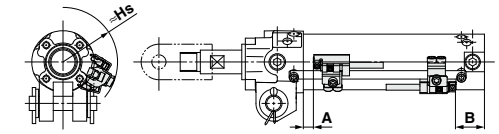
Note) Only available for the CK□1A series (Clevis width 16.5 mm)

Auto Switch Mounting (Rod Mounting Type)

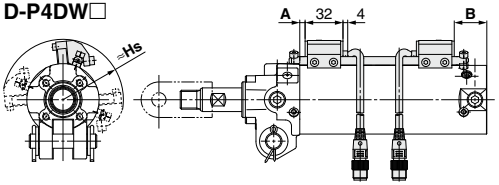
Auto Switch Proper Mounting Position (Detection at Stroke End) and Its Mounting Height

Rod mounting

D-P3DWA□

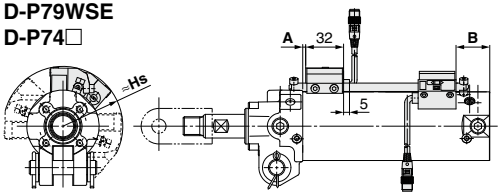


D-P4DW□



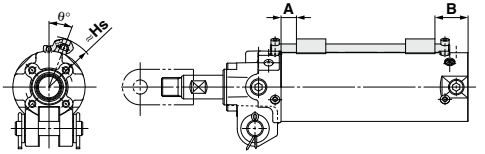
Note) The above drawing is the switch rod mounting example for the D-P4DWS□.

D-P79WSE
D-P74□



Note) The above drawing is the switch rod mounting example for the D-P79WSE.

D-M9□/M9□W
D-M9□A/A9□



Note) The above drawing is the mounting example for the D-M9□ and D-A9□.

Auto Switch Mounting Position and Its Height: Rod Mounting Type

Unit: mm

Auto switch model	Symbol	Auto switch set value and its height		
		ø40	ø50	ø63
D-P3DWA□	**A**	8.5	6	6
	B	23.5	29	29
	Hs	46.5	52	59
D-P4DW□	**A**	6	3.5	3.5
	B	21	26.5	26.5
	Hs	45.5	51	58.5
D-P79WSE **D-P74□**	**A**	3	0.5	0.5
	B	18	23.5	23.5
	Hs	47.5	51	57.5
D-M9□ **D-M9□W** **D-M9□A**	**A**	13	10.5	10.5
	B	28	33.5	33.5
	Hs	39	44.5	51.5
D-A9□	**A**	9	6.5	6.5
	B	24	29.5	29.5
	Hs	39	44.5	51.5

Note 1) The mounting position should be referred for reference only for the auto switch mounting position at the stroke end detection. Adjust the auto switch after confirming the operation to set actually.

Note 2) The auto switch mounting position is temporarily set at the time of shipping from our factory. Change it to the desired position in accordance to your facility.

Note 3) For 2-color indication, mount the switch in the middle of the green indication.

Note 4) Adjust the auto switch after confirming the operating conditions in the actual setting.

Minimum Stroke for Auto Switch Mounting

Unit: mm

Auto switch model	With 1 pc.	With 2 pcs.	
		Different surfaces	Same surface
D-P3DWA□	50	50	
D-P4DW□			
D-P79WSE			
D-P74□			

Note1) When two D-P3DWA□ are mounted to the cylinder with stroke 50 mm, mount them on different surfaces.

Note2) The standard strokes of CKG1 are 50, 75, 100, 125 and 150 mm. The values in the table above are not based on the minimum detection interval when setting the D-P3DWA auto switch, but on the standard minimum stroke of the cylinder.

Operating Range

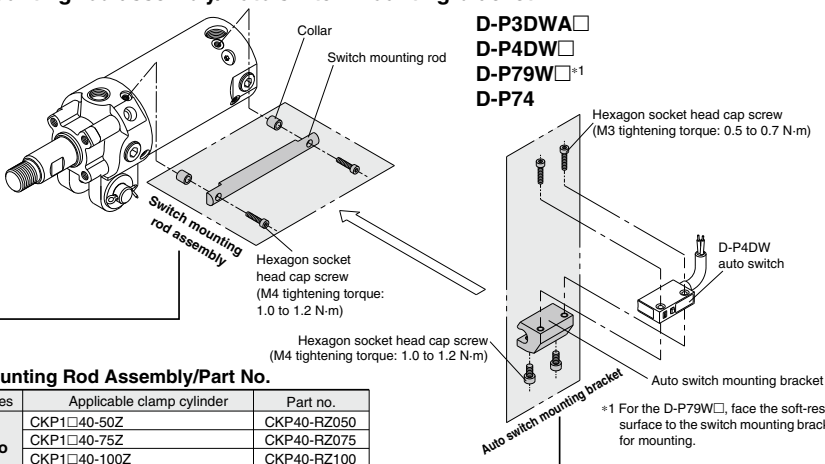
Unit: mm

Auto switch model	Bore size		
	40	**50**	**63**
D-P3DWA□	5.5	5.5	5.5
D-P4DW□	4	4	4.5
D-P79WSE	8	9	9.5
D-P74□			
D-M9□ **D-M9□W** **D-M9□A**	4	4.5	5
D-A9□	8	8	5

* Values which include hysteresis are for guideline purpose only, they are not a guarantee (assuming approximately ±30% dispersion) and may change substantially depending on the ambient environment.

Auto Switch Mounting Bracket/Part No.

Switch mounting rod assembly/Auto switch mounting bracket

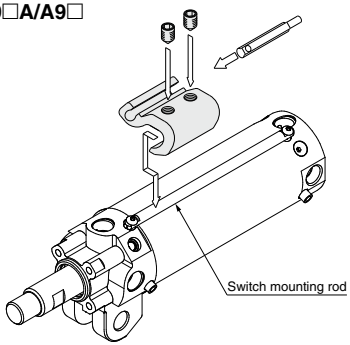


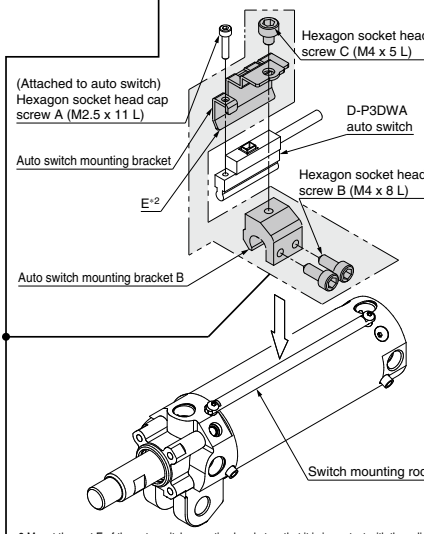
*1 For the D-P79W□, face the soft-resin mold surface to the switch mounting bracket side for mounting.

Switch Mounting Rod Assembly/Part No.

Applicable series	Applicable clamp cylinder	Part no.
Dedicated to CKP1□40	CKP1□40-50Z	CKP40-RZ050
	CKP1□40-75Z	CKP40-RZ075
	CKP1□40-100Z	CKP40-RZ100
	CKP1□40-125Z	CKP40-RZ125
	CKP1□40-150Z	CKP40-RZ150
CKG1□40/50/63 **CKP1□50/63** **Common**	CKG1□40-50Z CKG1□50-50Z/CKP1□50-50Z CKG1□63-50Z/CKP1□63-50Z	CKG40-RZ050
	CKG1□40-75Z CKG1□50-75Z/CKP1□50-75Z CKG1□63-75Z/CKP1□63-75Z	CKG40-RZ075
	CKG1□40-100Z CKG1□50-100Z/CKP1□50-100Z CKG1□63-100Z/CKP1□63-100Z	CKG40-RZ100
	CKG1□40-125Z CKG1□50-125Z/CKP1□50-125Z CKG1□63-125Z/CKP1□63-125Z	CKG40-RZ125
	CKG1□40-150Z CKG1□50-150Z/CKP1□50-150Z CKG1□63-150Z/CKP1□63-150Z	CKG40-RZ150
	CKG1□50-200Z/CKP1□50-200Z CKG1□63-200Z/CKP1□63-200Z	CKG40-RZ200

D-M9□/M9□W
D-M9□A/A9□





*2 Mount the part E of the auto switch mounting bracket so that it is in contact with the cylinder tube.

Note 1) The tightening torque for a hexagon socket head cap screw (M2.5) is 0.2 to 0.3 N·m. Hold the shorter side of a hexagon wrench, and turn it to tighten. (Too much tightening may break the switch)

Note 2) Tighten the hexagon socket head cap screws B and C (M4) with a tightening torque of 1 to 1.2 N·m.

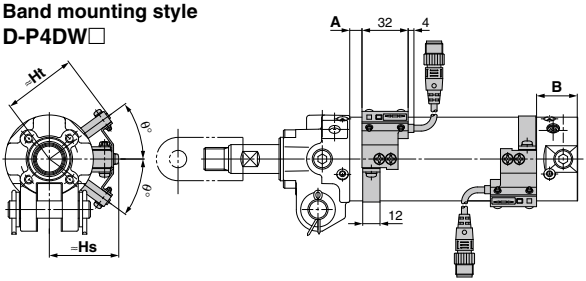
Auto Switch Mounting Bracket/Part No.

Applicable cylinder series	Applicable auto switch model	Part no.		
		40	50	63
CKG1	D-P3DWA□	BK7-040S		
	D-P4DW□	BK1T-040		
	D-M9□ D-A9□	BA7-040		
CKP1	D-P79WSE D-P74L/Z	BAP1T-040		

Auto Switch Mounting (Band Mounting Type)

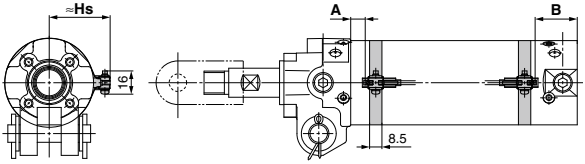
Auto Switch Mounting Position (Detection at Stroke End) and Its Mounting Height

Band mounting style
D-P4DW□

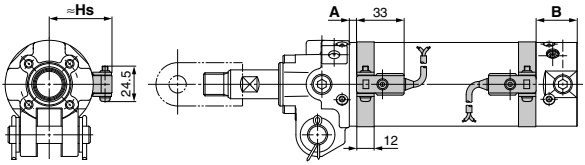


Note) The above drawing is the switch band mounting example for the D-P4DWS□.

D-M9□/M9□W
D-M9□A/A9□



D-B54



⚠ Caution

As for the precautions on the auto switches, product specifications, refer to pages 437 to 439.

Operating Range

Unit: mm

Auto switch model	Bore size		
	40	50	63
D-P4DW□	5	5	5.5
D-M9□ **D-M9□W** **D-M9□A**	5.5	6.5	7
D-A9□	8	8	9
D-B54	10	10	11

∗ Values which include hysteresis are for guideline purpose only, they are not a guarantee (assuming approximately ±30% dispersion) and may change substantially depending on the ambient environment.

Auto Switch Mounting Position and Its Height Unit: mm

Auto switch model	Symbol	Auto switch set value and its height		
		ø40	ø50	ø63
D-P4DW□	**A**	6	3.5	3.5
	B	21	26.5	26.5
	Hs	43	48	55
	Ht	46	51.5	58.5
	θ	40°	36°	33°
D-M9□ **D-M9□W** **D-M9□A**	**A**	13	10.5	10.5
	B	28	33.5	33.5
	Hs	35	40.5	47.5
D-A9□	**A**	9	6.5	6.5
	B	24	29.5	29.5
	Hs	35	40.5	47.5
D-B54	**A**	3.5	1	1
	B	18.5	24	24
	Hs	38	43.5	50.5

Note 1) The mounting position should be referred for reference only for the auto switch mounting position at the stroke end detection. Adjust the auto switch after confirming the operation to set actually.
Note 2) The auto switch mounting position is temporarily set at the time of shipping from our factory. Change it to the desired position in accordance to your facility.
Note 3) For the D-M9□/M9□W/M9□A/A9□, A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.
Note 4) As for the D-P4DW□ type, band mounting type, the auto switch mounting bracket and the auto switch have to be ordered separately. For details, refer to page 426.
Note 5) For 2-color indication, mount the switch in the middle of the green indication.

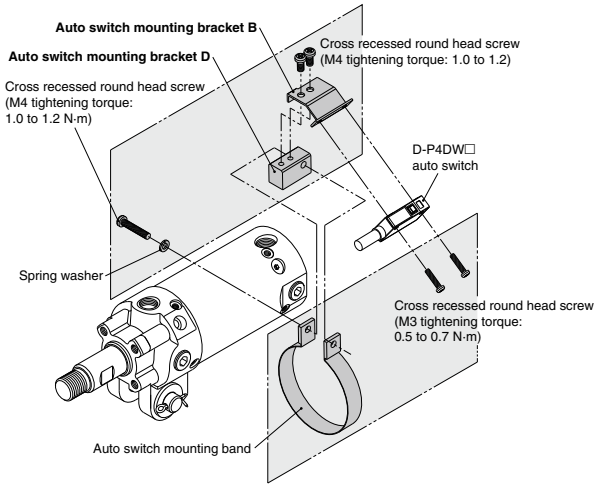
Minimum Stroke for Auto Switch Mounting Unit: mm

Auto switch model	With 1 pc.	With 2 pcs.	
		Different surfaces	Same surface
D-P3DWA□	50	50	50
D-P4DW□			
D-P79WSE			
D-P74□			
D-M9□ **D-M9□W** **D-M9□A**			
D-A9□			
D-B54	50	50	75

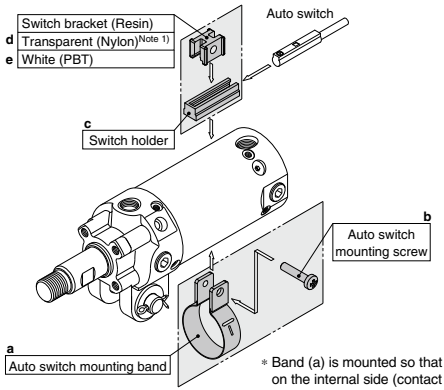
Note 1) When two D-P3DWA□ are mounted to the cylinder with stroke 50 mm, mount them on different surfaces.
Note 2) The standard strokes of CKG1 are 50, 75, 100, 125 and 150 mm. The values in the table above are not based on the minimum detection interval when setting the D-P3DWA auto switch, but on the standard minimum stroke of the cylinder.

Auto Switch Mounting Brackets/Part No.

Auto switch model	Bore size (mm)		
	40	50	63
D-P4DW□	BA8-040	BA8-050	BA8-063



Auto switch model	Bore size (mm)		
	40	50	63
D-M9□ D-M9□W D-A9□	BMA3-040 (A set of a, b, c, d)	BMA3-050 (A set of a, b, c, d)	BMA3-063 (A set of a, b, c, d)
D-M9□A[Note 2)]	BMA3-040S (A set of a, b, c, e)	BMA3-050S (A set of a, b, c, e)	BMA3-063S (A set of a, b, c, e)



D-B54	BA-04 (A set of band and screw)	BA-05 (A set of band and screw)	BA-06 (A set of band and screw)

Note 1) Since the switch bracket (made from nylon) are affected in an environment where alcohol, chloroform, methylamines, hydrochloric acid or sulfuric acid is splashed over, so it cannot be used. Please contact SMC regarding other chemicals.

Note 2) As the indicator LED is projected from the switch unit, indicator LED may be damaged if the switch bracket is fixed on the indicator LED.

Made to Order

Please contact SMC for detailed dimensions, specifications and lead times.

Made to Order

Symbol

1 CK□1□40, 50, 63/With Air Cushion on Both Ends -X1515

Clamp cylinder with air cushion on both ends (with cushion in the clamped/unclamped side)

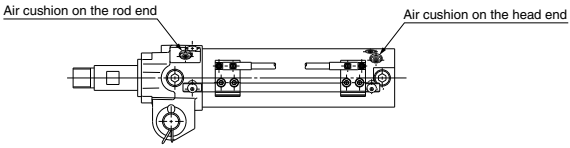
⚠ Caution

The air cushion is integrated in the unclamped side (head end) only for the standard type CK1/CKG1/CKP1 series, bore size 40, 50 and 63. When an air cushion is required on both ends, it is available as a made-to-order -X1515.

Basic type	**CK1**	Enter the standard model no.	–	**X1515**
Built-in standard magnet type with magnetic field resistant auto switch	**CKG1**	Enter the standard model no.	–	**X1515**
Built-in strong magnet type with magnetic field resistant auto switch	**CKP1**	Enter the standard model no.	–	**X1515**

With air cushion on both ends

Dimensions: Same as standard type



Specifications: Same as standard type

Specifications

Thread type	Rc1/4 only
Specifications other than above	Same as standard type

Specific Product Precautions 1

Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 3 to 12 for Actuator and Auto Switch Precautions.

Cushion/Speed Controller Adjustment

⚠ Danger

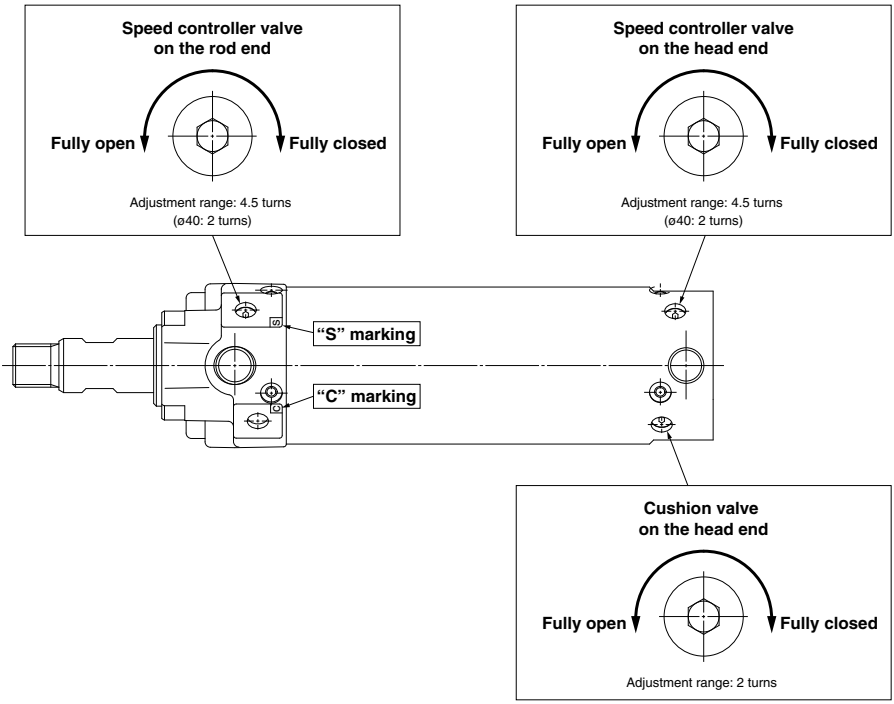
1. Retaining construction with crimping is integrated in the speed controller valve and cushion valve. However, do no rotate the cushion valve exceeding two turns, and do not rotate the speed controller valve exceeding four and half turns (ø40: maximum two turns). If 0.6 N·m or more of torque is applied, the valve may become loose and may jump out depending on the amount of air pressure.

Cushion Adjustment

The air cushion is built in on the head end for the CK1 series. The cushion is pre-adjusted at the time of shipping. However, re-adjust the cushion valve on the tube cover depending on the operating speed and load before use. When rotating the cushion valve clockwise, the orifice becomes smaller, resulting in stronger cushion reaction.

Speed Controller Adjustment

The speed controller (exhaust restrictor) is built in on the rod and head end for the CK1 series. The cushion is pre-adjusted at the time of shipping. However, re-adjust the speed controller valve ("S" marking on the rod cover) on each cover depending on the operating speed and load before use.
When rotating the speed controller valve clockwise, the orifice becomes smaller, which reduces the speed.



Specific Product Precautions 2

Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 3 to 12 for Actuator and Auto Switch Precautions.

Piping Port/Switch Mounting Rod Location Change

Piping Port Location Change

Piping is possible from 3 directions. When the piping port location is changed, carefully follow the instructions as detailed below.

⚠ Warning

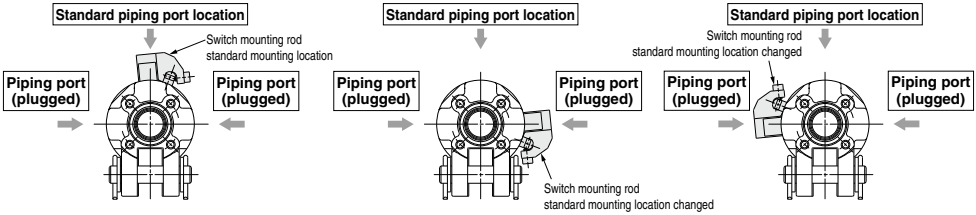
1. Do not leave out the component parts when the piping port location is changed.

Even if one of the component parts is kept away, malfunction may occur, resulting in dangerous operation.

2. To prevent air leakage, re-wind the pipe tape and fit into the changed location when the piping port location is changed.

Switch Mounting Rod Location Change

The switch mounting rod is mountable from 3 directions. When the switch mounting rod is changed, carefully follow the instruction as detailed below.

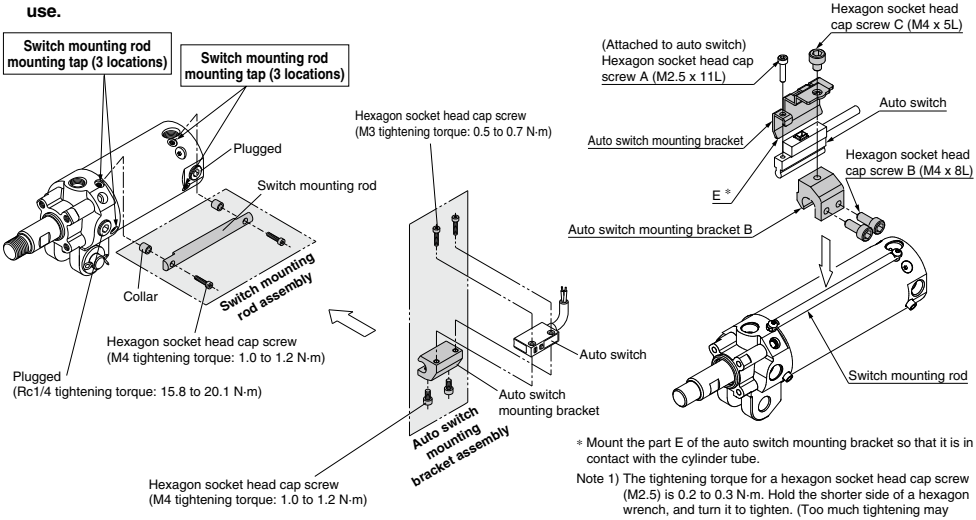


⚠ Warning

1. Mount all the component parts to the changed location.

Even if one of the component parts is kept away, the switch detection error etc. may occur. (Switch mounting rod, switch mounting spacer, hexagon socket head cap screw)

2. After the switch mounting rod location is changed, confirm that there is no interference with other parts before use.



∗ Mount the part E of the auto switch mounting bracket so that it is in contact with the cylinder tube.

Note 1) The tightening torque for a hexagon socket head cap screw (M2.5) is 0.2 to 0.3 N·m. Hold the shorter side of a hexagon wrench, and turn it to tighten. (Too much tightening may break the switch)

Note 2) Tighten the hexagon socket head cap screws B and C (M4) with a tightening torque of 1 to 1.2 N·m.

Specific Product Precautions 3

Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 3 to 12 for Actuator and Auto Switch Precautions.

Handling

Magnetic field resistant auto switches D-P79WSE/D-P74□ are specifically for use with built-in strong magnet type cylinders and are not compatible with general auto switches or cylinders. Built-in strong magnet type cylinders are labeled as follows.

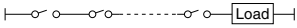
Magnetic field resistant cylinder with built-in magnet
(For use with auto switch D-P7)

Mounting

1. **The minimum stroke for mounting magnetic field resistant auto switches is 50 mm.**
2. **In order to fully use the capacity of magnetic field resistant auto switches, strictly observe the following precautions.**
   1) Do not allow the magnetic field to occur when the cylinder piston is moving.
   2) When a welding cable or welding gun electrodes are near the cylinder, change the auto switch position to fall within the operational ranges shown in the graphs on page 439, or move the welding cable away from the cylinder.
   3) Cannot be used in an environment where welding cables surround the cylinder.
   4) Please consult with SMC when a welding cable and welding gun electrodes (something energized with secondary current) are near multiple auto switches.
3. **In an environment where spatter directly hits the lead wire, cover the lead wire with protective tubing.**
   Use protective tubing with inside diameter of ø8 or more that has excellent heat resistance and flexibility.
4. **Be careful not to drop objects, make dents, or apply excessive impact force when handling.**
5. **When operating two or more cylinders with magnetic field resistant auto switches in parallel and proximity, separate the auto switches from other cylinder tubes by an additional 30 mm or more.**
6. **Avoid wiring in a manner in which repeated bending stress or tension is applied to lead wires.**
7. **Please consult with SMC regarding use in an environment with constant water and coolant splashing.**
8. **Be careful of the mounting direction of the magnetic field resistant auto switch D-P79WSE.**
   Be sure to face the soft-resin mold surface to the switch mounting bracket side for mounting.
   (Refer to page 432 for mounting example and page 1034 for soft-resin mold surface.)

Wiring/Current and Voltage

1. **Always connect the auto switch to the power supply after the load has been connected.**
2. **Series connection**
   When auto switches are connected in series as shown below:
   Note that the voltage drop due to the internal resistance of the LED increases.

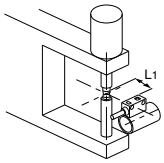


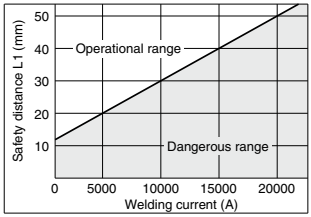
Specific Product Precautions 4

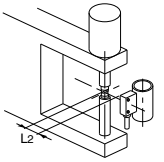
Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 3 to 12 for Actuator and Auto Switch Precautions.

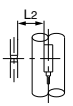
Data: Magnetic Field Resistant Reed Auto Switches (D-P79WSE, D-P74□) Safety Distance

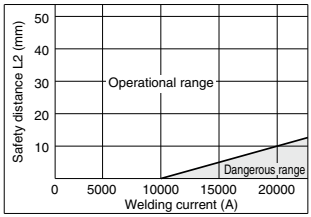
Safety Distance from Side of Auto Switch



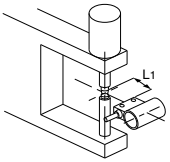


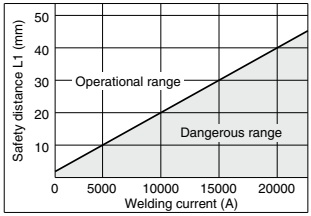


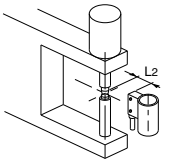


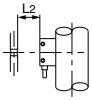


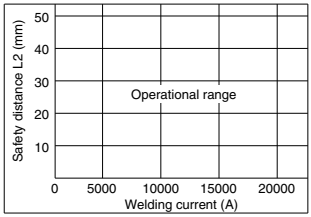
Safety Distance from Top of Auto Switch











Related Products

Please contact SMC for detailed dimensions, specifications and lead times.

1 CKGA80, 100/CKPA80, 100/With Magnetic Field Resistant Auto Switch (Rod Mounting Type)

Built-in standard magnet type with magnetic field resistant auto switch

CK G A 80 – 100 Y – P3DWASC

Built-in strong magnet type with magnetic field resistant auto switch

CK P A 80 – 100 Y – P79WSE

Built-in standard magnet

Built-in strong magnet

Clevis width: 28 mm

Bore size

80	80 mm
100	100 mm

Cylinder stroke (mm)

80	50, 75, 100, 125, 150, 175, 200
100	50, 75, 100, 125, 150, 175, 200

End bracket

Nil	None
Y	Double knuckle joint (with tap)

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

Number of auto switches

Nil	2 pcs.
S	1 pc.

Auto switch

Nil	Without auto switch (Built-in magnet) Without switch mounting rod	
P	Without auto switch (Built-in magnet) With switch mounting rod	
P3DWASC	D-P3DWASC	CKGA series
P3DWASE	D-P3DWASE	
P3DWAL	D-P3DWAL	
P3DWAZ	D-P3DWAZ	
P4DWSC	D-P4DWSC	CKGA series
P4DWSE	D-P4DWSE	
P4DWL	D-P4DWL	
P4DWZ	D-P4DWZ	
P79WSE	D-P79WSE	CKPA series
P74L	D-P74L	
P74Z	D-P74Z	

Specifications

Clevis width	28 mm	CKGA/CKPA series

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	With air cushion on both ends
Speed controller	Equipped on both ends
Lubrication	Non-lube
Stroke length tolerance	$^{+1.0}_{0}$
Mounting Note)	Double clevis

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

Auto Switch Mounting Bracket Assembly/Part No.

Applicable auto switch model	Auto switch mounting bracket part no.	
	80	100
D-P3DWASC	BK7-080S	
D-P3DWASE		
D-P3DWAL		
D-P3DWAZ		
D-P4DWSC	BAP2-063	
D-P4DWSE		
D-P4DWL		
D-P4DWZ		
D-P79WSE	BAP1-063	
D-P74L		
D-P74Z		

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

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

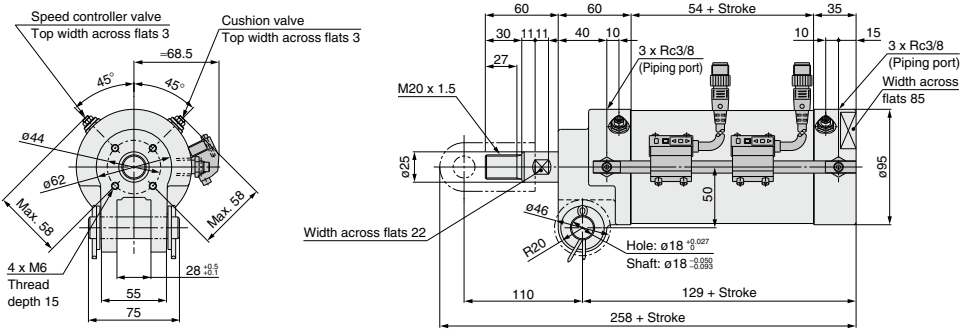
Symbol for the auto switch type is "Nil" as shown below.
CKGA: (Example) CKGA80-50Y
CKPA: (Example) CKPA80-50Y

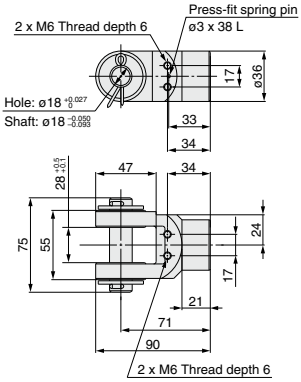
2) Built-in standard (strong) magnet type without auto switch, with switch mounting rod

Symbol for the auto switch type is "P" as shown below.
CKGA: (Example) CKGA80-50Y-P
CKPA: (Example) CKPA80-50Y-P

Dimensions

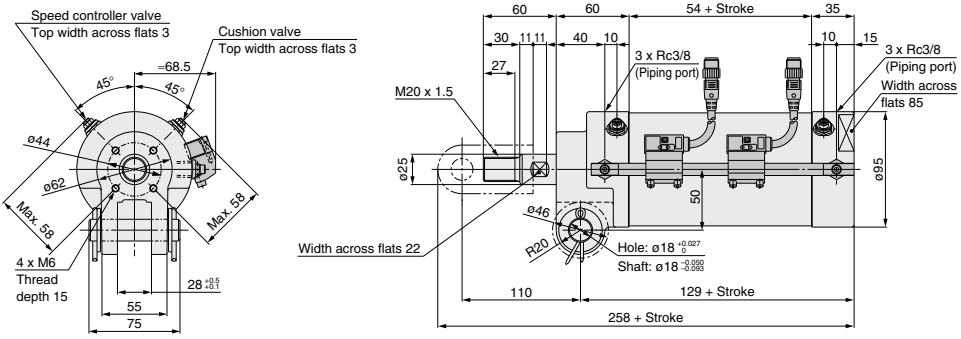
CKGA80 Built-in standard magnet type/with magnetic field resistant auto switch (D-P4DWS□)





Double knuckle joint

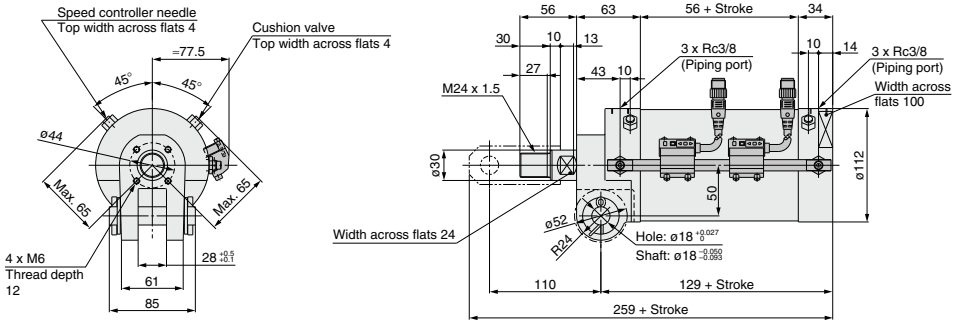
CKPA80 Built-in strong magnet type/with magnetic field resistant auto switch (D-P79WSE)

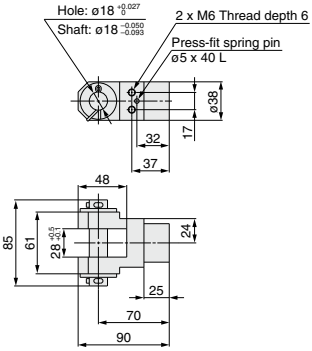


1 CKGA80, 100/CKPA80, 100/With Magnetic Field Resistant Auto Switch (Rod Mounting Type)

Dimensions

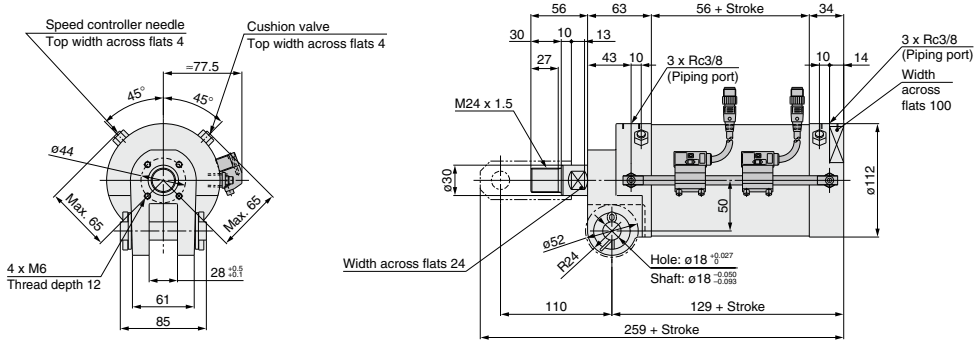
CKGA100 Built-in standard magnet type/with magnetic field resistant auto switch (D-P4DWS□)





Double knuckle joint

CKPA100 Built-in strong magnet type/with magnetic field resistant auto switch (D-P79WSE)



∗ Please contact SMC for details of the CKGA□/CKPA□ series.

2 CKGA32/With Magnetic Field Resistant Auto Switch D-P4DW□□ (Band Mounting Type)

Band mounting of the magnetic field resistant auto switch (D-P4DW□□) to the built-in standard magnet clamp cylinder (CKGA32 series) is possible by ordering the auto switch mounting bracket and the auto switch separately.

Built-in standard magnet type with magnetic field resistant auto switch

CK G A 32 – 100 Y

- **Built-in standard magnet**
- **Clevis width: 12 mm**
- **Bore size: 32 mm**
- **Cylinder stroke (mm)**: 50, 75, 100, 125, 150
- **End bracket**

Nil	None
I	Single knuckle joint (without tap)
Y	Double knuckle joint (without tap)

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

Specifications

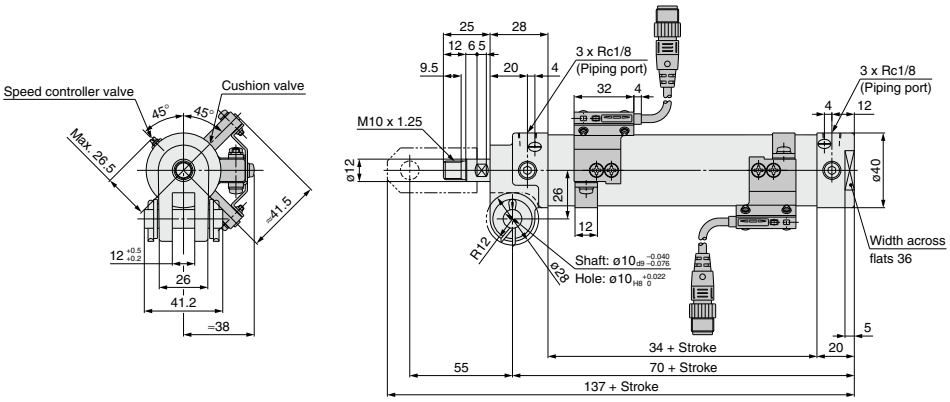
Clevis width	12 mm	CKGA32 series

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	With air cushion on both ends
Lubrication	Non-lube
Stroke length tolerance	$^{+1.0}_{0}$
Mounting Note)	Double clevis

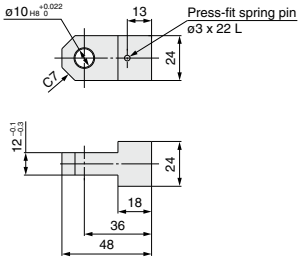
Note) A clevis pin, cotter pins and flat washers are provided as a standard.

Applicable auto switch model	Auto switch mounting bracket part no.
D-P4DWSC	BA8-032
D-P4DWSE	
D-P4DWL	
D-P4DWZ	

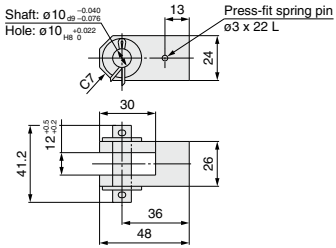
Dimensions



Single knuckle joint



Double knuckle joint



∗ Please contact SMC for details of the CKGA32 series.