

# Free Mount Cylinder: Long Stroke Type Non-rotating Rod, Double Acting, Single Rod Series **CUK**

ø6, ø10, ø16, ø20, ø25, ø32



## How to Order

Without auto switch

**CUK** **6** **60** **D**

With auto switch

**CDUK** **6** **60** **D** **M9B**

Built-in magnet

Non-rotating rod type

Bore size

6	6 mm
10	10 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm

Port thread type

Symbol	Type	Bore size
Nil	M5 x 0.8	ø6, ø10, ø16, ø20, ø25
	Rc1/8	ø32
TN	NPT1/8	ø32
TF	G1/8	ø32

Number of auto switches

Nil	2 pcs.
S	1 pc.

Auto switch

Nil	Without auto switch
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\* Refer to the table below for applicable auto switches.

\* Auto switches are shipped together but not assembled.

Action

D	Double acting
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Cylinder stroke (mm)

ø6, ø10, ø16	40, 50, 60
ø20, ø25, ø32	60, 70, 80, 90, 100

### Applicable Auto Switches/Refer to page 68 to 72 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	Perpendicular	In-line	0.5 (Nil)	3 (L)	5 (Z)		Applicable load		
													IC circuit	Relay, PLC	
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	●	—	—	IC circuit	—
				2-wire	24 V	12 V	100 V	A93V	A93	●	●	—	—	—	Relay, PLC
Solid state switch	Diagnostic indication (2-color indication)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NV	M9N	●	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)				M9PV	M9P	●	●	○	○	IC circuit	
				2-wire	M9BV	M9B	●	●	○	○	—				
				3-wire (NPN)	F9NWV	F9NW	●	●	○	○	IC circuit				
				3-wire (PNP)	F9PWV	F9PW	●	●	○	○	IC circuit				
				2-wire	F9BWV	F9BW	●	●	○	○	—				

\* Lead wire length symbols: 0.5 m.....Nil (Example) M9N  
3 m.....L (Example) M9NL  
5 m.....Z (Example) M9NZ

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

\* Normally closed (NC=b contact), solid states switches (Model D-F9G, F9H) are also available. For detail, refer to page 7-9-23 in Best Pneumatics 2004 Vol. 7 catalog.

\* For detail about auto switches with pre-wired connector, refer to page 7-9-36 in the Best Pneumatics 2004 Vol. 7 catalog.



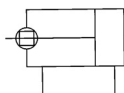
## Specifications

Bore size (mm)	6	10	16	20	25	32
Fluid	Air					
Proof pressure	1.05 MPa					
Maximum operating pressure	0.7 MPa					
Minimum operating pressure	0.15 MPa	0.10 MPa	0.08 MPa			
Ambient and fluid temperature	Without auto switch: -10 to 70°C (No freezing) With auto switch: -10 to 60°C (No freezing)					
Lubrication	Non-lube					
Piston speed	50 to 500 mm/s					
Cushion	Rubber bumper					
Rod end thread	Male thread					
Thread tolerance	JIS Class 2					
Stroke length tolerance	$^{+1.0}_0$ mm					
Rod non-rotating accuracy <small>Note)</small>	$\pm 0.8^\circ$		$\pm 0.5^\circ$			

Note) No load: Rod at retracted

### JIS Symbol

Double acting,  
Single rod



## Standard Stroke

(mm)

Bore size (mm)	Standard stroke (mm)
6, 10, 16	40, 50, 60
20, 25, 32	60, 70, 80, 90, 100



## Made to Order Specifications (For details, refer to page 43.)

Symbol	Specifications
-XB9	Low speed (10 to 50 mm/s)
-XB13	Low speed (5 to 50 mm/s)
-XC19	Intermediate stroke (with a spacer built-in)

Weight/( ): Denotes the values with D-A93.

(g)

Model	Stroke (mm)						
	40	50	60	70	80	90	100
C(D)UK6-□D	49 (59)	55 (65)	61 (71)	—	—	—	—
C(D)UK10-□D	71 (81)	79 (89)	87 (97)	—	—	—	—
C(D)UK16-□D	102 (132)	114 (144)	126 (156)	—	—	—	—
C(D)UK20-□D	—	—	243 (284)	267 (308)	291 (332)	315 (356)	339 (380)
C(D)UK25-□D	—	—	405 (460)	440 (495)	475 (530)	510 (565)	545 (600)
C(D)UK32-□D	—	—	617 (695)	669 (747)	721 (799)	773 (851)	825 (903)

\* For the auto switch weight, refer to page 68 to 72.

### Allowable Rotational Torque

Make sure that rotational torque is not applied to the piston rod of a long stroke type cylinder. If the rotation torque were applied unavoidably, refer to page 22 for details.

### Tightening Torque

When mounting a CUK long stroke series, refer to page 3.

### Theoretical Output

Specifications are the same as CU series double acting, single rod. Refer to page 3.

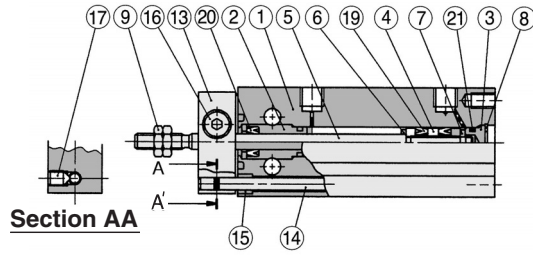
### Auto Switch Mounting Position

For the auto switch mounting position of CDUK long stroke series, refer to page 6, since specifications are the same as standard type, double acting, single rod type.

# Series CUK

## Construction

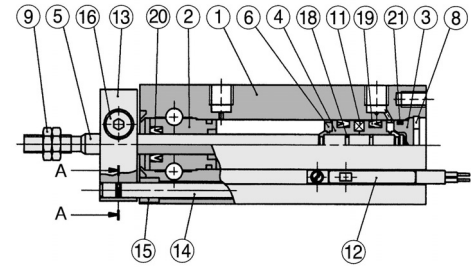
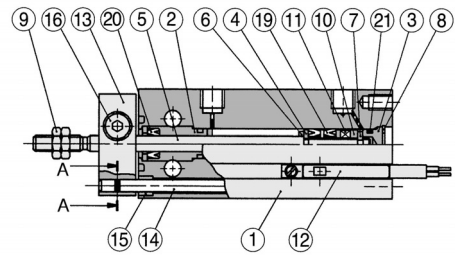
ø6



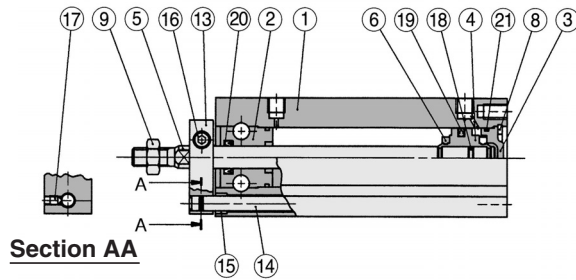
ø10

Section AA

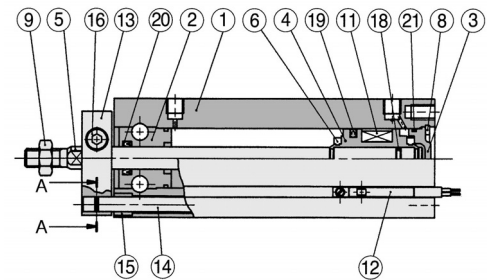
With auto switch



ø16 to ø32



Section AA



### Component Parts

No.	Description	Material	Note
1	Cylinder tube	Aluminum alloy	Hard anodized
2	Rod cover	Aluminum bearing alloy	Hard anodized
3	Head cover	Brass	ø6 to ø10, Electroless nickel plated
		Aluminum alloy	ø16 to ø32, Clear chromated
4	Piston	Brass	ø6 to ø10
		Aluminum alloy	ø16 to ø32, Chromated
5	Piston rod	Stainless steel	
6	Bumper A	Urethane	
7	Bumper B	Urethane	
8	Snap ring	Carbon tool steel	Phosphate coated
9	Rod end nut	Carbon steel	Nickel plated
10	Magnet holder	Brass	ø6

### Component Parts

No.	Description	Material	Note
11	Magnet	Magnetic material	
12	Auto switch	—	
13	Non-rotating plate	Aluminum alloy	Nickel plated
14	Guide rod	Stainless steel	
15	Bushing	Oil-impregnated sintered alloy	Black zinc chromated
16	Hexagon socket head cap screw	Carbon steel	Black zinc chromated
17	Hexagon socket head set screw	Carbon steel	
18	Piston gasket	NBR	
19	Piston seal		
20	Rod seal		
21	Gasket		

### Replacement Parts: Seal Kit

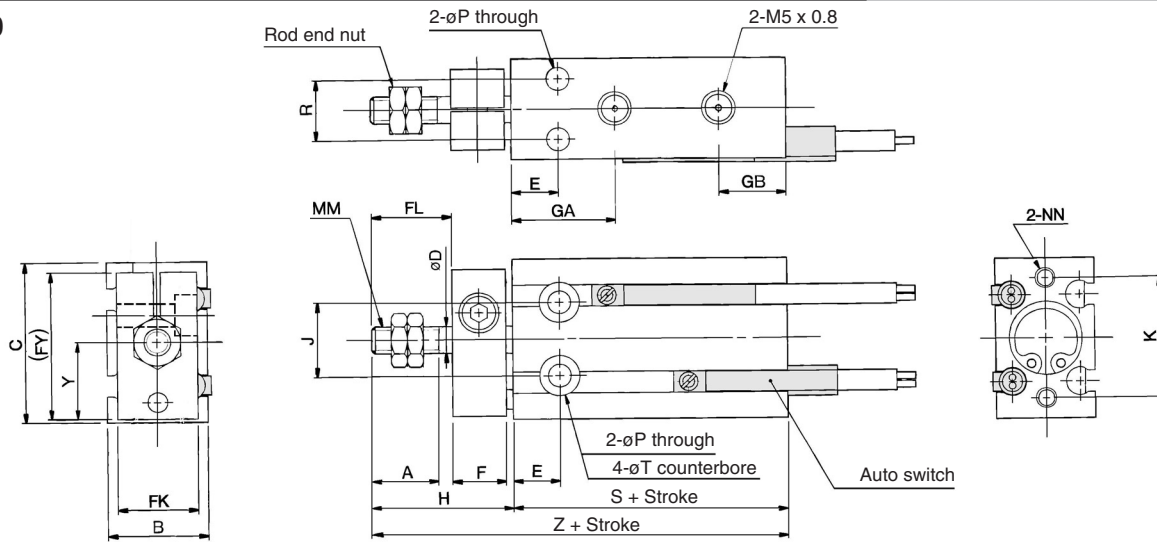
Bore size (mm)	Kit no.	Contents
10	CU10D-PS	Set of nos. above ⑱, ⑳, ㉑.
16	CU16D-PS	
20	CU20D-PS	
25	CU25D-PS	
32	CU32D-PS	



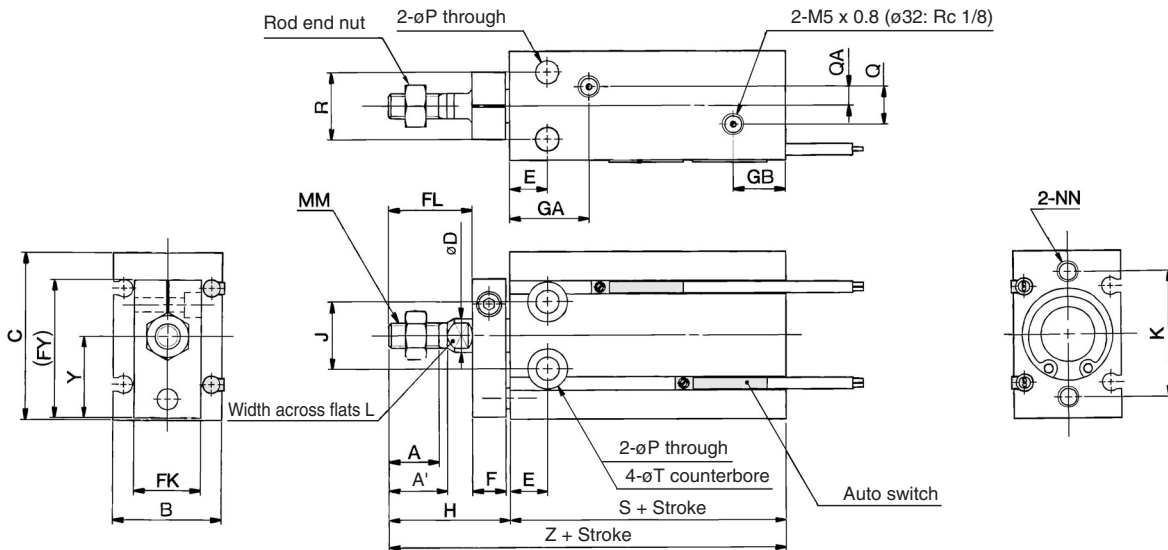
\* Seal kit includes ⑱, ⑳, ㉑. Order the seal kit, based on each bore size.

**Dimensions: Non-rotating Rod Type; Double Acting, Single Rod**

**ø6, ø10**

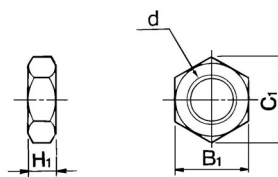


**ø16 to ø32**



**Rod End Nut/Accessory**

Material: Carbon steel



Part no.	Applicable bore size (mm)	d	H <sub>1</sub>	B <sub>1</sub>	C <sub>1</sub>
NTP-006	6	M3 x 0.5	1.8	5.5	6.4
NTP-010	10	M4 x 0.7	2.4	7	8.1
NTJ-015A	16	M5 x 0.8	4	8	9.2
NT-015A	20	M6 x 1.0	5	10	11.5
NT-02	25	M8 x 1.25	5	13	15.0
NT-03	32	M10 x 1.25	6	17	19.6

Bore size (mm)	A	A'	B	C	D	E	F	FL	FK	FY	GA	GB	H	J	K	L	MM
6	7	—	13	22	3	7	8	9	11	20.5	15	10	18	10	17	—	M3 x 0.5
10	10	—	15	24	4	7	8	12	12	22	16.5	10	21	11	18	—	M4 x 0.7
16	11	12.5	20	32	6	7	8	17	13	28	16.5	11.5	26	14	25	5	M5 x 0.8
20	12	14	26	40	8	9	8	20	16	33	19	12.5	29	16	30	6	M6 x 1.0
25	15.5	18	32	50	10	10	10	22	20	43.5	21.5	13	33	20	38	8	M8 x 1.25
32	19.5	22	40	62	12	11	12	29	24	51.5	23	12.5	42	24	48	10	M10 x 1.25

Bore size (mm)	NN	P	Q	QA	R	T	Y	Without auto switch		With auto switch	
								S	Z	S	Z
6	M3 x 0.5 depth 5	3.2	—	—	7	6 depth 4.8	10.5	33	51	33	51
10	M3 x 0.5 depth 5	3.2	—	—	9	6 depth 5	11.5	36	57	36	57
16	M4 x 0.7 depth 6	4.5	4	2	12	7.6 depth 6.5	15.5	30	56	40	66
20	M5 x 0.8 depth 8	5.5	9	4.5	16	9.3 depth 8	19.5	36	65	46	75
25	M5 x 0.8 depth 8	5.5	9	4.5	20	9.3 depth 9	24.5	40	73	50	83
32	M6 x 1.0 depth 9	6.6	13.5	4.5	24	11 depth 11.5	30.5	42	84	52	94