

# Free Mount Cylinder: Non-rotating Rod Type

## Double Acting, Single Rod

# Series CUK

ø6, ø10, ø16, ø20, ø25, ø32

### How to Order

**With auto switch**

**CUK 6 - 30 D - M9BW**

**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
	Rc 1/8	ø32
TN	NPT 1/8	ø32
TF	G 1/8	ø32

**Action**

**D** Double acting

**Standard stroke (mm)**

ø6, ø10, ø16	5, 10, 15, 20, 25, 30
ø20, ø25, ø32	5, 10, 15, 20, 25, 30, 40, 50

**Auto switch**

**Nil** Without auto switch

\* Refer to the table below for applicable auto switches.

**Number of auto switches**

Nil	2 pcs.
S	1 pc.

**Made to order**

\* Refer to page 503 for the Made to Order specifications.

**Built-in Magnet Cylinder Model**

If a built-in magnet cylinder without an auto switch is required, there is no need to enter the symbol for the auto switch.  
(Example): CDUK20-25D

### Applicable Auto Switches/Refer to pages 1263 to 1371 for further information on auto switches.

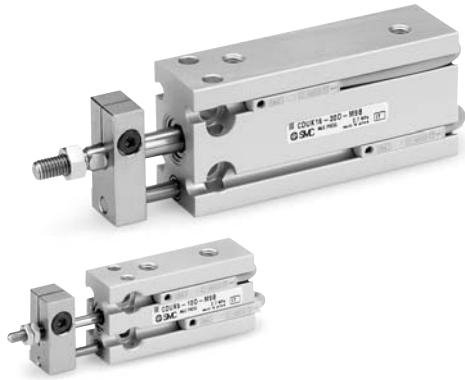
Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)				Pre-wired connector	Applicable load	
					DC	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)			
Solid state switch	Diagnostic indication (2-color indication)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NV	M9N	●	●	●	○	IC circuit	Relay, PLC
				3-wire (PNP)				M9PV	M9P	●	●	●	○		
				2-wire				M9BV	M9B	●	●	●	○		
				3-wire (NPN)				M9NWV	M9NW	●	●	●	○		
				3-wire (PNP)	24 V	5 V, 12 V	—	M9PWV	M9PW	●	●	●	○	IC circuit	—
				2-wire				M9BWV	M9BW	●	●	●	○		
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	—	●	—	IC circuit	—
				2-wire	24 V	12 V	100 V or less	A93V	A93	●	—	●	—	—	Relay, PLC
			No	—				A90V	A90	●	—	●	—	IC circuit	—

\* Lead wire length symbols: 0.5 m ..... Nil (Example) M9NW  
 1 m ..... M (Example) M9NWM  
 3 m ..... L (Example) M9NWL  
 5 m ..... Z (Example) M9NWX

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

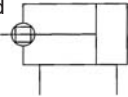
\* Since there are applicable auto switches other than the above, refer to page 538 for details.  
 \* For detail about auto switches with pre-wired connector, refer to pages 1328 to 1329.  
 \* Auto switches are shipped together but not assembled.

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



## JIS Symbol

Double acting,  
Single rod



## Made to Order Specifications (For details, refer to pages 1395 to 1498.)

Symbol	Specifications
-XB6	Heat resistant (−10 to 150°C)
-XB7	Cold resistant (−40 to 700°C)
-XB9	Low speed (10 to 50 mm/s)
-XB13	Low speed (5 to 50 mm/s)
-XC19	Intermediate stroke (5 mm spacer)
-XC22	Fluororubber seals
-XC34	Non-rotating plate with work piece mounting screw (No extended part on the rod end)

## ⚠ Precautions

Be sure to read before handling.  
Refer to front matters 54 and 55 for  
Safety Instructions and pages 3 to 11 for  
Actuator and Auto Switch Precautions.

## Operating Precautions

### ⚠ Caution

- Do not place your fingers in the clearance between the non-rotating plate and the cylinder tube.  
Your fingers could get caught between the non-rotating plate and the cylinder tube when the piston rod retracts. Therefore, never place your finger in this area.  
Because the cylinder outputs a great force, it could lead to injury if precautions are not taken to prevent your fingers from getting caught.
- When using the non-rotating style, make sure that rotational torque is not applied to the piston rod. If rotational torque must be applied due to unavoidable circumstances, make sure to use it at the allowable rotational torque or less, which is shown in the table on the right.

## 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					
Stroke length tolerance	+1.0 0 mm					
Rod non-rotating accuracy <sup>Note)</sup>	±0.8°			±0.5°		

Note) No load: Rod at retracted

## Standard Stroke

Bore size (mm)	Standard stroke (mm)	For long stroke, refer to page 520.
6, 10, 16	5, 10, 15, 20, 25, 30	
20, 25, 32	5, 10, 15, 20, 25, 30, 40, 50	

## Minimum Stroke for Auto Switch Mounting

(mm)

No. of auto switches mounted	Applicable auto switch		
	D-A9□, D-A9□V	D-M9□, D-M9□V	D-M9□W, D-M9□WV
1 pc.	5	5	5
2 pcs.	10	5	10

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

(g)

Bore size (mm)	Stroke (mm)							
	5	10	15	20	25	30	40	50
C(D)UK6-□D	28 (33)	31 (41)	34 (44)	37 (47)	40 (50)	43 (53)	—	—
C(D)UK10-□D	43 (48)	47 (57)	51 (61)	55 (65)	59 (69)	63 (73)	—	—
C(D)UK16-□D	60 (85)	66 (96)	72 (102)	78 (108)	84 (114)	90 (120)	—	—
C(D)UK20-□D	113 (147)	124 (164)	136 (176)	148 (188)	160 (200)	172 (211)	195 (235)	219 (260)
C(D)UK25-□D	212 (266)	229 (288)	246 (305)	263 (322)	280 (339)	297 (356)	335 (390)	370 (424)
C(D)UK32-□D	331 (404)	357 (435)	383 (461)	409 (487)	435 (513)	461 (539)	513 (591)	565 (643)

\* For the auto switch mass, refer to page 1263.

## Allowable Rotational Torque

Bore size (mm)	6	10	16	20	25	32
Allowable rotational torque (N·m)	0.0015	0.02	0.04	0.10	0.15	0.20

## Tightening Torque

When mounting Series CUK, refer to  
page 484.

## Theoretical Output

Specifications are the same as CU series  
double acting, single rod. Refer to page  
484.

## Auto Switch Mounting Position

For the auto switch mounting position of  
Series CDUK, refer to page 488, since  
specifications are the same as standard  
type, double acting, single rod type.

CUJ

CU

CQS

CQ2

RQ

CQM

MU

D-□

-X□

Individual

-X□

Technical

data