

Free Mount Cylinder: Non-rotating Rod Type Double Acting, Double Rod

Series **CUKW**

ø6, ø10, ø16, ø20, ø25, ø32



How to Order

Without auto switch CUKW 6 [] 30 D

With auto switch CDUKW 6 [] 30 D - M9B []

Built-in magnet
Non-rotating rod type
Double rod

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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Standard stroke (mm)

ø6, ø10, ø16	5, 10, 15, 20, 25, 30, 40, 50, 60
ø20, ø25, ø32	5, 10, 15, 20, 25, 30, 40, 50, 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)		IC circuit	Relay, PLC	
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	●	—			—
				2-wire	24 V	12 V	100 V	A93V	A93	●	●	—	—	—	—
						5 V, 12 V	100 V or less	A90V	A90	●	●	—	—	—	IC circuit
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)				F9NWV	F9NW	●	●	○	○	IC circuit	
				3-wire (PNP)				F9PWV	F9PW	●	●	○	○	—	
				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.

Free Mount Cylinder: Non-rotating Rod Type **Series CUKW**



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	0.18 MPa	0.13 MPa	0.11 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>	±0.8°			±0.5°		

Note) No load: Rod in the non-rotating plate side at retracted

Standard Stroke

Bore size (mm)	Standard stroke (mm)
6, 10, 16	5, 10, 15, 20, 25, 30, 40, 50, 60
20, 25, 32	5, 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100

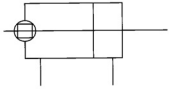
Minimum Stroke for Auto Switch Mounting

(mm)

No. of auto switches mounted	Applicable auto switch		
	D-A9□, D-A9□V	D-M9□, D-M9□V	D-F9□W, D-F9□WV
1 pc.	5	5	5
2 pcs.	10	5	10

JIS Symbol

Non-rotating rod



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

(g)

Model	Stroke (mm)												
	5	10	15	20	25	30	40	50	60	70	80	90	100
C(D)UKW6-□D	33 (38)	36 (46)	40 (50)	43 (53)	46 (56)	50 (60)	57 (67)	64 (74)	71 (81)	—	—	—	—
C(D)UKW10-□D	51 (56)	56 (66)	60 (70)	65 (75)	69 (79)	74 (84)	83 (93)	92 (102)	101 (111)	—	—	—	—
C(D)UKW16-□D	84 (109)	91 (121)	98 (128)	105 (135)	112 (142)	119 (149)	133 (163)	147 (177)	161 (191)	—	—	—	—
C(D)UKW20-□D	150 (185)	163 (203)	177 (217)	191 (231)	205 (245)	219 (259)	247 (286)	275 (315)	303 (343)	331 (371)	359 (399)	387 (427)	415 (455)
C(D)UKW25-□D	276 (330)	296 (355)	316 (375)	336 (395)	357 (416)	377 (436)	421 (476)	462 (516)	500 (559)	541 (600)	582 (641)	623 (682)	664 (723)
C(D)UKW32-□D	434 (507)	465 (543)	495 (573)	526 (604)	556 (634)	587 (665)	669 (747)	709 (787)	770 (848)	831 (909)	892 (970)	953 (1031)	1014 (1092)

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

Theoretical Output

Specifications are the same as double acting, double rod (Series CUW). Refer to page 9.

Tightening Torque

When mounting Series CUKW, refer to page 3.

Allowable Rotational Torque

Ensure that rotational torque is not applied to the piston rod of Series CUKW. If rotational torque are applied unavoidably, refer to page 22.

Auto Switch Mounting Position

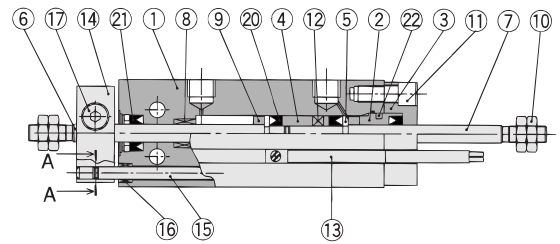
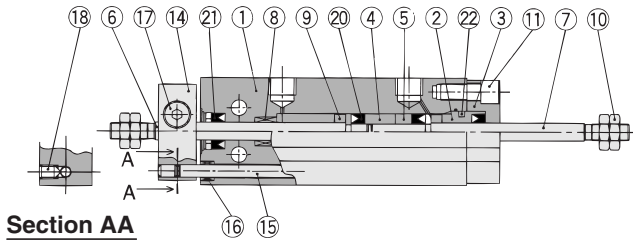
For the auto switch mounting position of Series CUKW, refer to page 12, since specifications are the same as double acting, double rod type.

Series CUKW

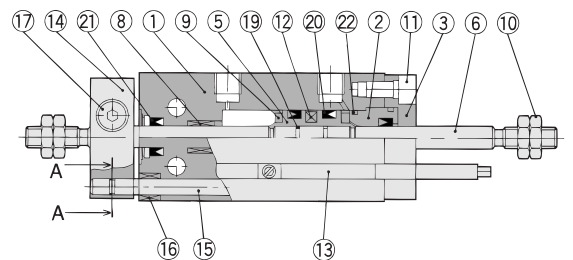
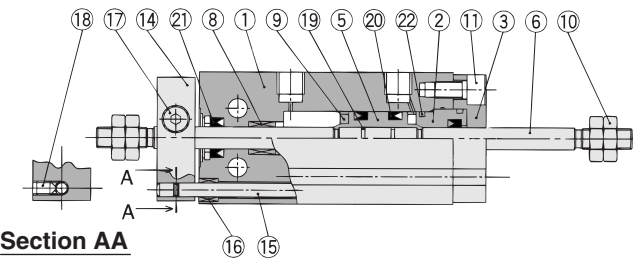
Construction

ø6

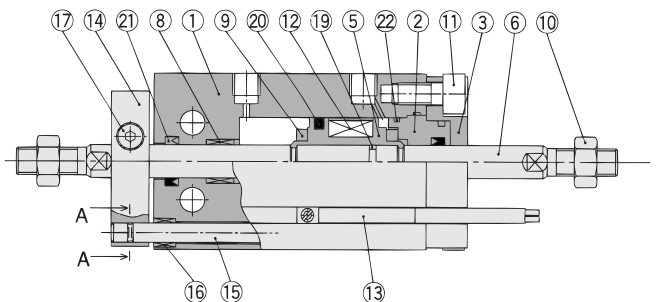
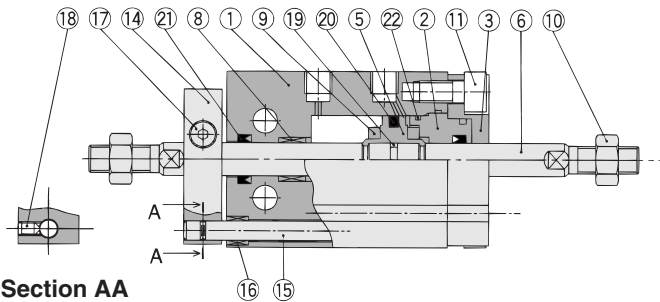
With auto switch



ø10



ø16 to ø32



Component Parts

No.	Description	Material	Note
1	Cylinder tube	Aluminum alloy	Hard anodized
2	Rod cover	Aluminum bearing alloy	Chromated
3	Rod cover retainer	Aluminum alloy	Hard anodized
4	Piston	Brass	ø6
5	Piston	Brass	ø6, ø10
		Aluminum alloy	ø16 to ø32, Chromated
6	Piston rod	Stainless steel	
7	Piston rod	Stainless steel	ø6
8	Bushing	Oil-impregnated sintered alloy	
9	Bumper	Urethane	
10	Rod end nut	Carbon steel	Nickel plated
11	Hexagon socket head cap screw	Carbon steel	Nickel plated

Component Parts

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

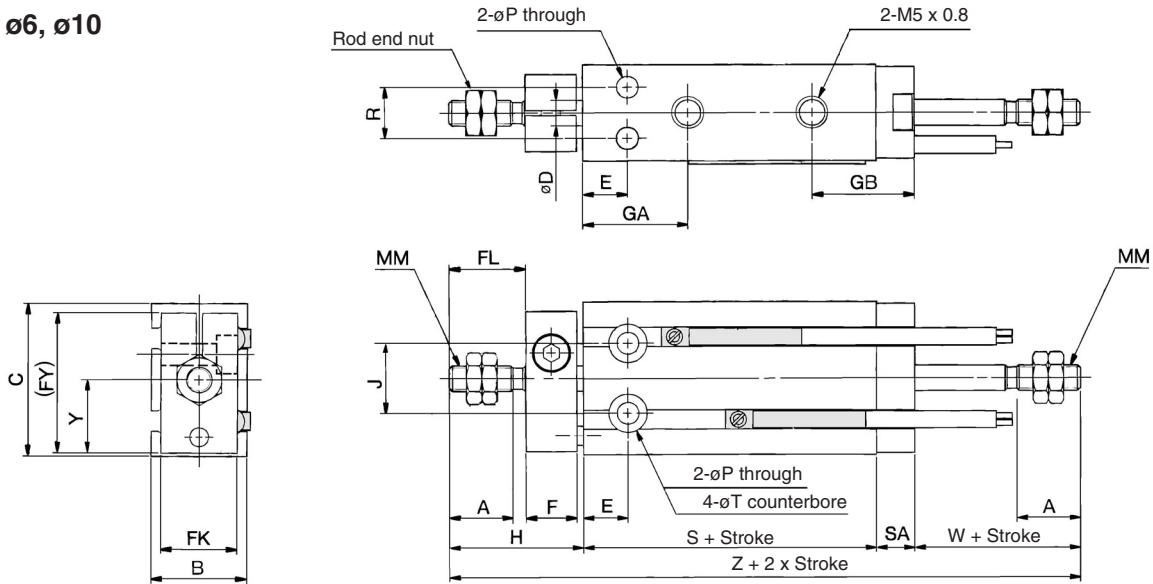
Replacement Parts: Seal Kit

Kit no.	Bore size (mm) / Part no.				
	10	16	20	25	32
	CUW10D-PS	CUW16D-PS	CUW20D-PS	CUW25D-PS	CUW32D-PS

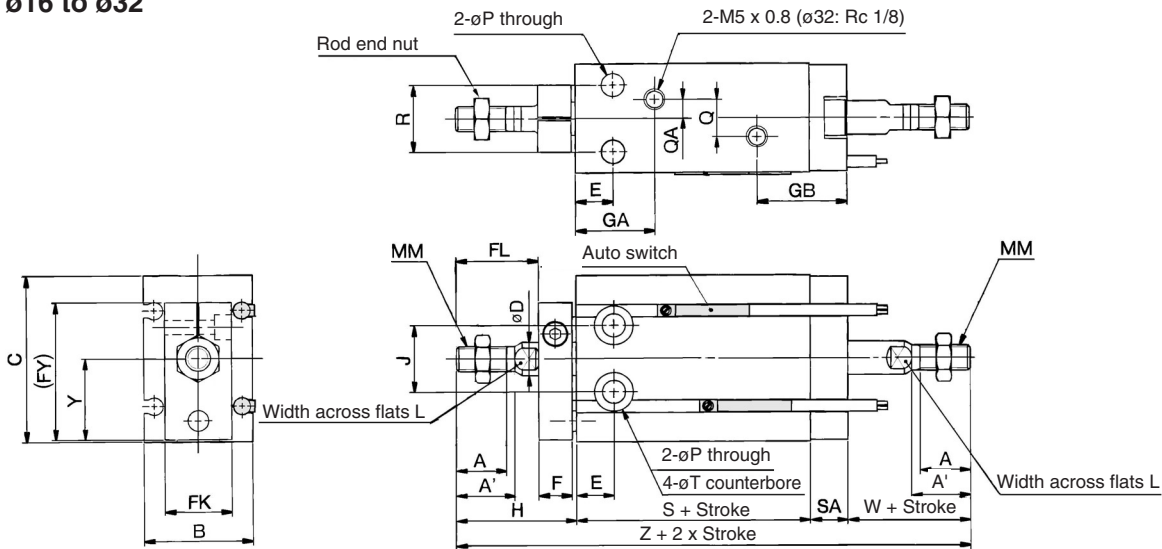
* Seal kit includes 20, 21, 22. Order the seal kit, based on each bore size.

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

ø6, ø10

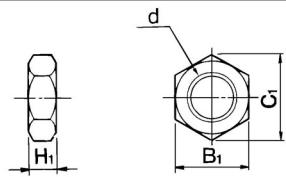


ø16 to ø32



Rod End Nut/Accessory

Material: Carbon steel



Part no.	Applicable bore size (mm)	d	H ₁	B ₁	C ₁
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	L	MM
6	7	—	13	22	3	7	8	9	11	20.5	15	16	18	10	—	M3 x 0.5
10	10	—	15	24	4	7	8	12	12	22	16.5	16	21	11	—	M4 x 0.7
16	11	12.5	20	32	6	7	8	17	13	28	16.5 ^{Note)}	19	26	14	5	M5 x 0.8
20	12	14	26	40	8	9	8	20	16	33	19	21.5	29	16	6	M6 x 1.0
25	15.5	18	32	50	10	10	10	22	20	43.5	21.5	22	33	20	8	M8 x 1.25
32	19.5	22	40	62	12	11	12	29	24	51.5	23	22.5	42	24	10	M10 x 1.25

Bore size (mm)	P	Q	QA	R	SA	T	W	Y	Without auto switch		With auto switch	
									S	Z	S	Z
6	3.2	—	—	7	6	6 depth 4.8	13	10.5	38	75	38	75
10	3.2	—	—	9	6	6 depth 5	16	11.5	36	79	36	79
16	4.5	4	2	12	7.5	7.6 depth 6.5	16	15.5	30	79.5	40	89.5
20	5.5	9	4.5	16	9	9.3 depth 8	19	19.5	36	93	46	103
25	5.5	9	4.5	20	9	9.3 depth 9	23	24.5	40	105	50	115
32	6.6	13.5	4.5	24	10	11 depth 11.5	27	30.5	42	121	52	131

Note) 5 stroke (CUKW16-5D): GA = 14.5