



Air Cylinder: Non-rotating Rod Type

Single Acting, Single Rod, Spring Return/Extend

Series CJ2K

ø10, ø16

How to Order

Spring extend

Spring return

Bore size

10	10 mm
16	16 mm

Standard stroke (mm)

ø10	15, 30, 45, 60
ø16	15, 30, 45, 60, 75, 100, 125, 150

* Intermediate strokes are available by the 1 mm interval with no stroke adjustment by spacer.
* When auto switch is mounted, refer to "Minimum Stroke for Auto Switch Mounting" on page 6-3-3.

Mounting style

B	Basic style
L	Axial foot style
F	Rod side flange style
D	Double clevis style

Action

S	Single acting, Spring return
T	Single acting, Spring extend

Built-in Magnet Cylinder Model

Suffix the symbol "-A" (Rail mounting style) or "-B" (Band mounting style) to the end of part number for cylinder with auto switch.

Example	Rail mounting style	CDJ2KB16-60S-A
	Band mounting style	CDJ2KB10-45S-B

* For rail mounting style, screws and nuts for 2 pcs. switches come with the rail.

Without auto switch

CJ2K L 16 45 S

With auto switch

CDJ2K L 16 45 S J79W

Built-in magnet

Auto switch

Number of auto switches

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

Port location on head cover

Symbol	Port location on head cover
Nil	Perpendicular to axis
R	Axial foot style

* For configuration, refer to page 6-3-34.
* Single acting, Spring return (S), Clevis style is available only for 90° to the axis.
* Not applicable to single acting, spring extend (T).

Applicable Auto Switch/Refer to page 6-16-1 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-wire connector	Applicable load					
					DC	AC	Band mounting (ø6, ø10, ø16)	Rail mounting (ø10, ø16)		0.5 (Nil)	3 (L)	5 (Z)	None (N)							
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	C76	—	A76H	●	●	—	—	—	IC circuit	Relay, PLC			
						—	200 V	—	A72	A72H	●	●	—	—	—					
	With diagnostic output (2-color indication)	Connector		2-wire	24 V	12 V	100 V	C73	A73	A73H	●	●	●	—	—	—				
						—	—	C73C	A73C	—	●	●	●	●	—					
Solid state switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	H7A1	F7NV	F79	●	●	○	—	○	IC circuit	Relay, PLC				
							H7A2	F7PV	F7P	●	●	○	—	○						
		Diagnostic indication (2-color indication)		Connector	2-wire	24 V	12 V	—	H7B	F7BV	J79	●	●	○	—		○			
							—	—	H7C	J79C	—	●	●	●	●		—			
	Water resistant (2-color indication)	Grommet		2-wire	12 V	5 V, 12 V	—	H7NW	F7NWV	F79W	●	●	○	—	○		IC circuit			
								H7PW	—	F7PW	●	●	○	—	○					
								With diagnostic output (2-color indication)	4-wire (NPN)	5 V, 12 V	H7BW	F7BWV	J79W	●	●		○	—	○	—
											H7BA	—	F7BA	—	●		●	○	—	
—	Grommet	2-wire	12 V	5 V, 12 V	—	—	F7BAV	—	—	●	○	—	—	IC circuit						
						H7NF	—	F79F	●	●	○	—	○							

* Lead wire length symbols: 0.5 m Nil (Example) C73C
 3 m L (Example) C73CL
 5 m Z (Example) C73CZ
 None N (Example) C73CN

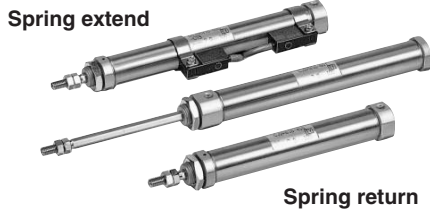
* Solid state switches marked with "○" are produced upon receipt of order.
 ** "D-A79W" cannot be mounted on bore size ø10 cylinder with air cushion.

- Since there are other applicable auto switches than listed, refer to page 6-3-13 for details.
- For details about auto switches with pre-wire connector, refer to page 6-16-60.

Air Cylinder: Non-rotating Rod Type Single Acting, Single Rod, Spring Return/Extend Series CJ2K

A cylinder which rod does not rotate because of the hexagonal rod shape.

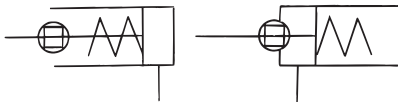
Non-rotating accuracy
 $\phi 10$: $\pm 1.5^\circ$, $\phi 16$: $\pm 1^\circ$
Can operate without lubrication.



JIS Symbol

Single acting,
Spring return

Single acting,
Spring extend



Made to Order Specifications
 (For details, refer to page 6-17-1.)

Symbol	Specifications
-XA□	Change of rod end shape
-XC51	With hose nipple

⚠ Precautions

Be sure to read before handling. Refer to pages 6-20-3 to 6-20-6 for Safety Instructions and Actuator Precautions.

Specifications

Action	Single acting, Spring return	Single acting, Spring extend
Fluid	Air	
Proof pressure	1.05 MPa	
Maximum operating pressure	0.7 MPa	
Minimum operating pressure	0.15 MPa	
Ambient and fluid temperature	Without auto switch: -10 to 70°C (No freezing) With auto switch: -10 to 60°C (No freezing)	
Cushion	Rubber bumper (Standard equipment)	
Lubrication	Not required (Non-lube)	
Thread tolerance	JIS Class 2	
Stroke length tolerance	$\begin{matrix} +1.0 \\ 0 \end{matrix}$	
Rod non-rotating accuracy	$\phi 10$	$\pm 1.5^\circ$
	$\phi 16$	$\pm 1^\circ$
Piston speed	50 to 750 mm/s	
Allowable kinetic energy	$\phi 10$	0.035 J
	$\phi 16$	0.090 J

Standard Stroke

Bore size (mm)	Standard stroke
10	15, 30, 45, 60
16	15, 30, 45, 60, 75, 100, 125, 150

* Intermediate strokes are available by the 1 mm interval with no stroke adjustment by spacer.

Spring Force

Bore size (mm)	Spring Force (N)	
	Retracted side	Extended side
10	6.86	3.53
16	14.2	6.86

Minimum Stroke for Auto Switch Mounting

Refer to "Minimum Stroke for Auto Switch Mounting" on page 6-3-3.

Mounting Style and Accessory/For details, refer to page 6-3-4.

Mounting		Basic style	Axial foot style	Rod side flange style	Double clevis* style
Standard equipment	Mounting nut	●	●	●	—
	Rod end nut	●	●	●	●
	Clevis pin	—	—	—	●
Option	Single knuckle joint	●	●	●	●
	Double knuckle joint *	●	●	●	●
	T-bracket	—	—	—	●

* Pin and snap ring are shipped together with double clevis and double knuckle joint.

Part numbers for auto switch mounting bracket are common with Series CJ2, double acting, single rod type. Refer to page 6-3-4.

Mounting Bracket Part No.

Mounting bracket	Bore size (mm)	
	10	16
Foot bracket	CJ-L016B	CJK-L016B
Flange bracket	CJ-F016B	CJK-F016B
T-bracket *	CJ-T010B	CJ-T016B

* T-bracket is used with double clevis (D).

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

Data

Series CJ2K

Weight/Spring Return, (): Spring Extend (g)

Bore size (mm)		10	16
Basic weight *	15 stroke	28(28)	63(64)
	30 stroke	35(34)	80(80)
	45 stroke	44(43)	102(100)
	60 stroke	53(51)	124(121)
	75 stroke	—	145(140)
	100 stroke	—	188(178)
	125 stroke	—	224(212)
	150 stroke	—	250(236)
Mounting bracket weight	Axial foot style	20	20
	Rod side flange style	15	15
	Double clevis style * (With pin)	4	10

* Mounting nut and rod end nut are included in the basic weight.
 ** Mounting nut is not attached to the double clevis style, so the mounting nut weight is already subtracted.
 Calculation: (Example) CJ2L10-45T
 • Basic weight 44 (ø10-45 stroke)
 • Mounting bracket weight ... 20 (Axial foot style)
 44 + 20 = 6 g

Copper-free (For CRT manufacturing process)

20-CJ2K **Mounting style** **Bore size** **Stroke** **Port location on head cover**

• Copper-free

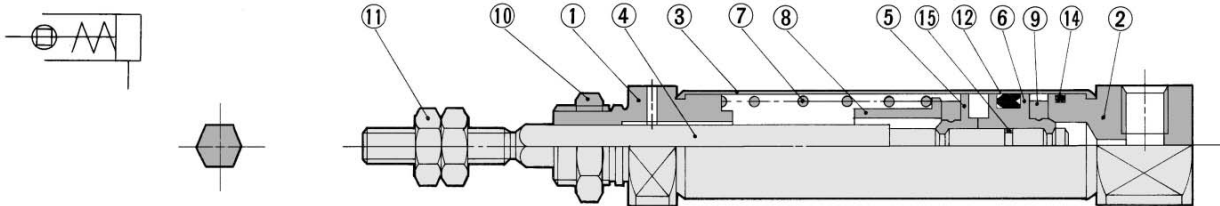
Eliminates the effects by copper based ions and fluorine based resins, etc. over the color cathode ray tube. Making copper based materials into electroless nickel plated treatment or changing them to the non-copper materials in order to prevent copper ions from generating.

Specifications

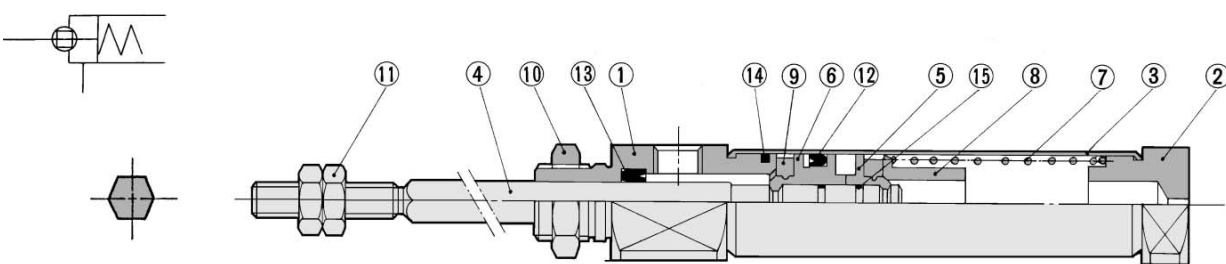
Action	Single acting/Spring return, Spring extend
Fluid	Air
Bore size (mm)	10, 16
Maximum operating pressure	0.7 MPa
Minimum operating pressure	0.15 MPa
Cushion	Rubber bumper (Standard equipment)
Rod non-rotating accuracy	ø10: ±1.5°, ø16: ±1°
Standard stroke (mm)	Same as standard type. (Refer to page 6-3-39.)
Auto switch	Mountable (Band mounting style)
Mounting	Basic style, Axial foot style, Rod side flange style, Double clevis style

Construction (Not able to disassemble.)

Single acting, Spring return



Single acting, Spring extend



Component Parts

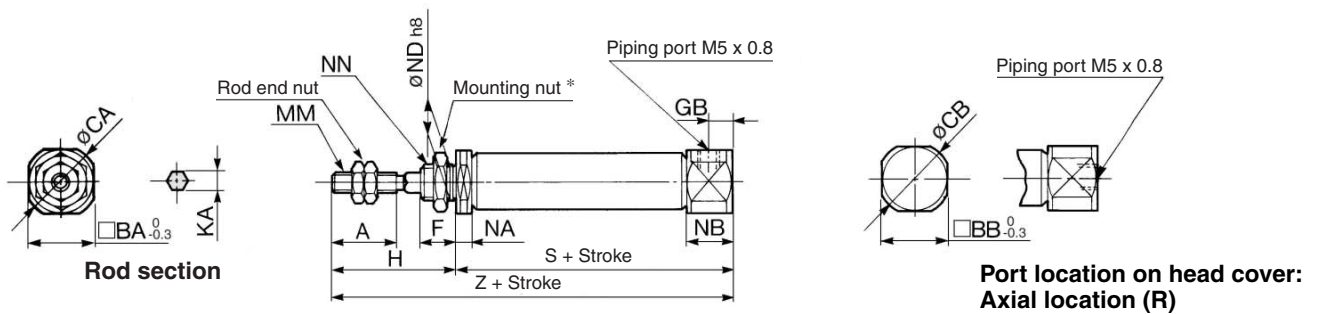
No.	Description	Material	Note
①	Rod cover	Aluminum alloy	Anodized
②	Head cover	Aluminum alloy	Anodized
③	Cylinder tube	Stainless steel	
④	Piston rod	Stainless steel	
⑤	Piston A	Brass	
⑥	Piston B	Brass	
⑦	Return spring	Piano wire	Zinc chromated
⑧	Spring seat	Brass	

No.	Description	Material	Note
⑨	Bumper	Urethane	
⑩	Mounting nut	Brass	Nickel plated
⑪	Rod end nut	Rolled steel	Nickel plated
⑫	Piston seal	NBR	
⑬	Rod seal	NBR	
⑭	Tube gasket	NBR	
⑮	Piston gasket	NBR	

Air Cylinder: Non-rotating Rod Type Single Acting, Single Rod, Spring Return/Extend **Series CJ2K**

Single Acting, Spring Return: Basic Style (B)

CJ2KB Bore size — Stroke S Port location on head cover



* Refer to page 6-3-11 for details of the mounting nut. (SNJ-016B for $\phi 10$, SNKJ-016B for $\phi 16$)

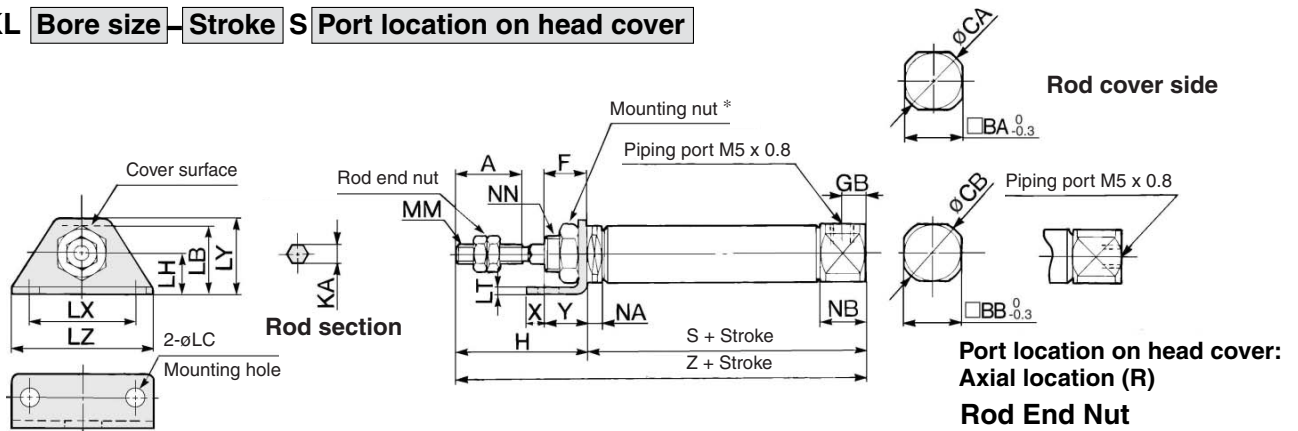
Bore size (mm)	A	BA	BB	CA	CB	F	GB	H	KA	MM	NA	NB	NDh8	NN
10	15	15	12	17	14	8	5	28	4.2	M4 x 0.7	5.5	9.5	10 ⁰ _{-0.022}	M10 x 1.0
16	15	18.3	18.3	20	20	8	5	28	5.2	M5 x 0.8	5.5	9.5	12 ⁰ _{-0.027}	M12 x 1.0

Dimensions by Stroke

Bore size (mm)	Symbol Stroke	S								Z							
		5 to 15	16 to 30	31 to 45	46 to 60	61 to 75	76 to 100	101 to 125	126 to 150	5 to 15	16 to 30	31 to 45	46 to 60	61 to 75	76 to 100	101 to 125	126 to 150
10		45.5	53	65	77	—	—	—	—	73.5	81	93	105	—	—	—	—
16		45.5	54	66	78	84	108	126	138	73.5	82	94	106	112	136	154	166

Single Acting, Spring Return: Axial Foot Style (L)

CJ2KL Bore size — Stroke S Port location on head cover



* Refer to page 6-3-11 for details of the mounting nut. (SNJ-016B for $\phi 10$, SNKJ-016B for $\phi 16$)

Bore size (mm)	A	BA	BB	CA	CB	F	GB	H	KA	LB	LC	LH	LT	LX	LY	LZ	MM	NA	NB	NN	X	Y
10	15	15	12	17	14	8	5	28	4.2	21.5	5.5	14	2.3	33	25	42	M4 x 0.7	5.5	9.5	M10 x 1.0	6	9
16	15	18.3	18.3	20	20	8	5	28	5.2	23	5.5	14	2.3	33	25	42	M5 x 0.8	5.5	9.5	M12 x 1.0	6	9

Dimensions by Stroke

Bore size (mm)	Symbol Stroke	S								Z							
		5 to 15	16 to 30	31 to 45	46 to 60	61 to 75	76 to 100	101 to 125	126 to 150	5 to 15	16 to 30	31 to 45	46 to 60	61 to 75	76 to 100	101 to 125	126 to 150
10		45.5	53	65	77	—	—	—	—	73.5	81	93	105	—	—	—	—
16		45.5	54	66	78	84	108	126	138	73.5	82	94	106	112	136	154	166

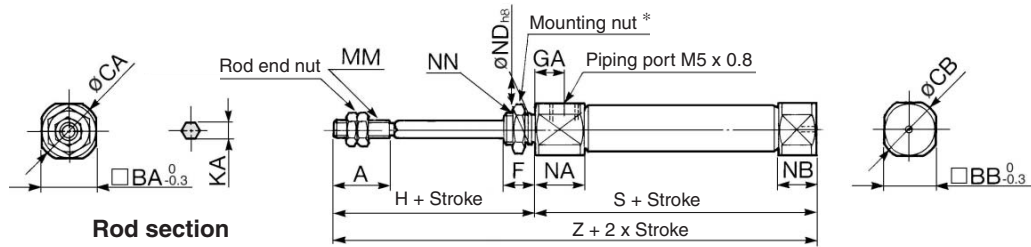
Material: Iron

Part no.	Applicable bore (mm)	B	C	d	H
NTJ-010A	10	7	8.1	M4 x 0.7	3.2
NTJ-015A	16	8	9.2	M5 x 0.8	4

Air Cylinder: Non-rotating Rod Type Single Acting, Single Rod, Spring Return/Extend **Series CJ2K**

Single Acting, Spring Extend: Basic Style (B)

CJ2KB Bore size — Stroke T



* Refer to page 6-3-11 for details of the mounting nut. (SNJ-016B for $\phi 10$, SNKJ-016B for $\phi 16$)

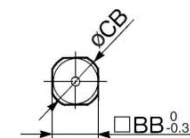
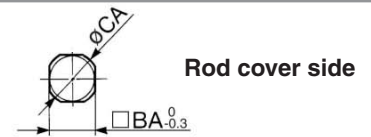
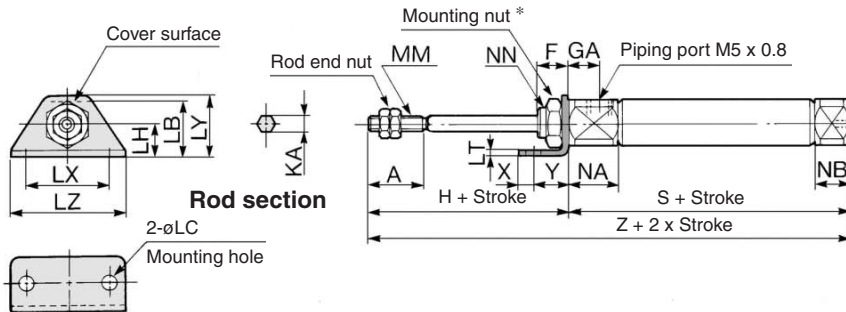
Bore size (mm)	A	BA	BB	CA	CB	F	GA	H	KA	MM	NA	NB	NDh8	NN
10	15	15	12	17	14	8	8	28	4.2	M4 x 0.7	12.5	5.5	10 _{-0.022}	M10 x 1.0
16	15	18.3	18.3	20	20	8	8	28	5.2	M5 x 0.8	12.5	5.5	12 _{-0.027}	M12 x 1.0

Dimensions by Stroke

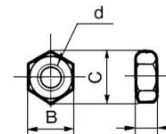
Bore size (mm)	Symbol Stroke	S								Z							
		5 to 15	16 to 30	31 to 45	46 to 60	61 to 75	76 to 100	101 to 125	126 to 150	5 to 15	16 to 30	31 to 45	46 to 60	61 to 75	76 to 100	101 to 125	126 to 150
10		48.5	56	68	80	—	—	—	—	76.5	84	96	108	—	—	—	—
16		48.5	57	69	81	87	111	129	141	76.5	85	97	109	115	139	157	169

Single Acting, Spring Extend: Axial Foot Style (T)

CJ2KL Bore size — Stroke T



Rod End Nut



Material: Iron

Part no.	Applicable bore (mm)	B	C	d	H
NTJ-010A	10	7	8.1	M4 x 0.7	3.2
NTJ-015A	16	8	9.2	M5 x 0.8	4

* Refer to page 6-3-11 for details of the mounting nut. (SNJ-016B for $\phi 10$, SNKJ-016B for $\phi 16$)

Bore size (mm)	A	BA	BB	CA	CB	F	GA	H	KA	LB	LC	LH	LT	LX	LY	LZ	MM	NA	NB	NN	X	Y
10	15	15	12	17	14	8	8	28	4.2	21.5	5.5	14	2.3	33	25	42	M4 x 0.7	12.5	5.5	M10 x 1.0	6	9
16	15	18.3	18.3	20	20	8	8	28	5.2	23	5.5	14	2.3	33	25	42	M5 x 0.8	12.5	5.5	M12 x 1.0	6	9

Dimensions by Stroke

Bore size (mm)	Symbol Stroke	S								Z													
		5 to 15	16 to 30	31 to 45	46 to 60	61 to 75	76 to 100	101 to 125	126 to 150	5 to 15	16 to 30	31 to 45	46 to 60	61 to 75	76 to 100	101 to 125	126 to 150						
10		48.5	56	68	80	—	—	—	—	76.5	84	96	108	—	—	—	—	—	—	—	—	—	—
16		48.5	57	69	81	87	111	129	141	76.5	85	97	109	115	139	157	169	—	—	—	—	—	—