

# Built-in Speed Controller: Double Acting Double Rod

# Series CJ2ZW

ø10, ø16

## How to Order

**Bore size**

10	10mm
16	16mm

**Mounting**

B	Basic
L	Axial foot
F	Front flange

**Standard stroke (mm)**

ø10	15, 30, 45, 60
ø16	15, 30, 45, 60

**Standard**  
CJ2ZW L 16 45

**With auto switch**  
CDJ2ZW L 16 45 C73

**With auto switch (Built-in magnet)**

**Auto switch**

—	2
S	1
n	n

\* Refer to the table below for selecting applicable auto switches.  
\* If requiring a built-in-magnet cylinder without an auto switch, refer to the model number example below.

- CJ1
- CJP
- CJ2**
- CM2
- C85
- CG1
- MB
- C95
- CA1
- CS1

### Applicable Auto Switches/Refer to p.5.3-2 for further information on auto switch.

Style	Special function	Electrical entry	Indicator	Wiring (Output)	Load voltage		Auto switch model**		Lead wire* (m)				Applicable load				
					DC	AC	Band	Perp.	In-line	0.5 (-)	3 (L)	5 (Z)	None (N)				
Reed switch	—	Grommet	Yes	3 wire (NPN)	—	5V	—	C76	—	A76H	●	●	—	—	IC	Relay PLC	
						—	200V	—	A72	A72H	●	●	—	—	—		
						12V	100V	C73	A73	A73H	●	●	●	—	—		
						5V, 12V	≤100V	C80	A80	A80H	●	●	—	—	—		
						12V	—	C73C	A73C	—	●	●	●	●	—		
Solid state switch	—	Grommet	Yes	2 wire	24V	5V, 12V	≤24V	C80C	A80C	—	●	●	●	●	IC	Relay PLC	
						—	—	A79W	—	●	●	—	—	—			
						3 wire (NPN)	5V, 12V	—	H7A1	F7NV	F79	●	●	○	—		IC
						3 wire (PNP)	—	—	H7A2	F7PV	F7P	●	●	○	—		—
						2 wire	12V	—	H7B	F7BV	J79	●	●	○	—		—
						—	—	—	H7C	J79C	—	●	●	●	●		—
						3 wire (NPN)	5V, 12V	—	H7NW	F7NWV	F79W	●	●	○	—		IC
						3 wire (PNP)	—	—	H7PW	—	F7PW	●	●	○	—		—
						2 wire	12V	—	H7BW	H7BWV	J79W	●	●	○	—		—
						—	—	—	H7BA	—	F7BA	—	●	○	—		—
Diagnostic indication (2 color)	Grommet	Yes	2 wire	5V, 12V	—	—	—	—	F7NT	—	●	○	—	IC			
Water resistant (2 color)							—	—	F7NF	—	F79F	●	●	○	—	—	
With timer							—	—	—	—	F7LF	●	●	○	—	—	
With diagnostic output (2 color)							—	—	—	—	—	—	—	—	—	—	
Latch with diagnostic output (2 color)	—	—	—	—	—	—	—	—	—	—	—	—	—				

### Part No. of Cylinder with Built-in Magnet

Symbol "-A" (rail mounting) or "-B" (band mounting) should be suffixed to the part No. of the cylinder with auto switch.

Ex.	Rail mounting	CDJ2ZWB16-60-A
	Band mounting	CDJ2ZWB10-45-B

\* Lead wire length 0.5m..... e.g.) C73C 5m.....Z e.g.) C73CZ  
3m.....L C73CL None.....N C73CN

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

\*\* "D-A79W" cannot be mounted on bore size ø10 cylinder with air cushion.

# Series CJ2ZW

## Space saving air cylinder with built-in speed controller



### Specifications

Action	Double acting/Double rod	
Fluid	Air	
Proof pressure	1.05MPa	
Max. operating pressure	0.7MPa	
Min. operating pressure	0.1MPa	
Ambient and fluid temperature	Without auto switch: -10°C to 70°C, With auto switch: -10°C to 60°C*	
Cushion	Rubber bumper	
Lubrication	Non-lube	
Thread tolerance	JIS class 2	
Stroke tolerance	+1.0 0	
Speed controller	Built-in	
Mounting	Basic, Axial foot, Front flange	
Piston speed	50 to 750mm/s	
Allowable kinetic energy	ø10	0.035J
	ø16	0.090J

\* No freezing

### Minimum Strokes for Auto Switch Mounting

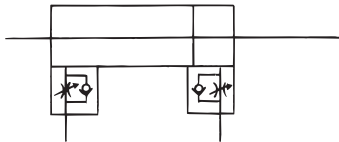
• Refer to p.1.3-3.

### Standard Stroke (mm)

Bore size	Standard stroke
10	15, 30, 45, 60
16	15, 30, 45, 60

### JIS symbol

Double acting/Double rod



### Mounting Accessories/Refer to p.1.3-12 for details.

Mounting		Basic	Axial foot	Front flange
Standard	Mounting nut	●	●	●
	Rod end nut	●	●	●
Option	Single knuckle joint	●	●	●
	Double knuckle joint*	●	●	●

\* Double clevis or double knuckle joint are packaged with pins and rings.

## ⚠ Precautions

Refer to p.1.3-14 before  
handling.

### Mounting Bracket Part No.

Bracket	Bore size (mm)	
	10	16
Foot	CJ-L010B	CJ-L016B
Flange	CJ-F010B	CJ-F016B

### Auto Switch Mounting Bracket Part No. (Band mounting)

Bore size (mm)	Bracket part No.	Note
10	BJ2-010	Common use to all of D-C7, C8 and D-H7
16	BJ2-016	

# Built-in Speed Controller: Double Acting Double Rod *Series CJ2ZW*

## Weight

(g)

Bore size (mm)	<b>10</b>	<b>16</b>
Basic weight*	50	85
Additional weight for each 15 of stroke	6	9
Mounting bracket weight	Axial foot	16
	Front flange	5
		15

\* This basic weight includes weight of rod end nut.

Calculation example:

CJ2ZW10-45

- Basic weight ..... 50 (ø10)
- Additional weight ..... 6/15 stroke
- Cylinder stroke ..... 45 stroke
- Mounting bracket weight ..... 16 (Axial foot)  
50+6/15 X 45+16=84g

## Copper Free

20-CJ2WZ **Mounting** **Bore size** **Stroke** **Port location on head cover**

•Copper free

To eliminate influences of copper ions or halogen ions during CRT manufacturing processes, copper and fluorine materials are not used as component parts.



## Specifications

Action	Double acting/Double rod
Bore size (mm)	ø10, ø16
Max. operating pressure	0.7MPa
Min. operating pressure	0.1MPa
Cushion	Rubber bumper
Standard stroke (mm)	15, 30, 45, 60
Auto switch	Possible to be mounted
Mounting	Basic, Axial foot, Front flange

CJ1

CJP

**CJ2**

CM2

C85

CG1

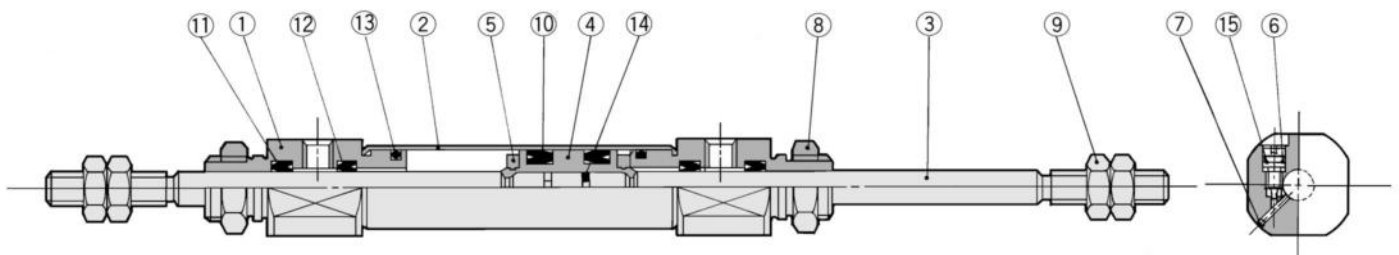
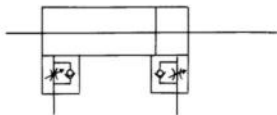
MB

C95

CA1

CS1

## Construction (The cylinder cannot be disassembled.)



## Component Parts

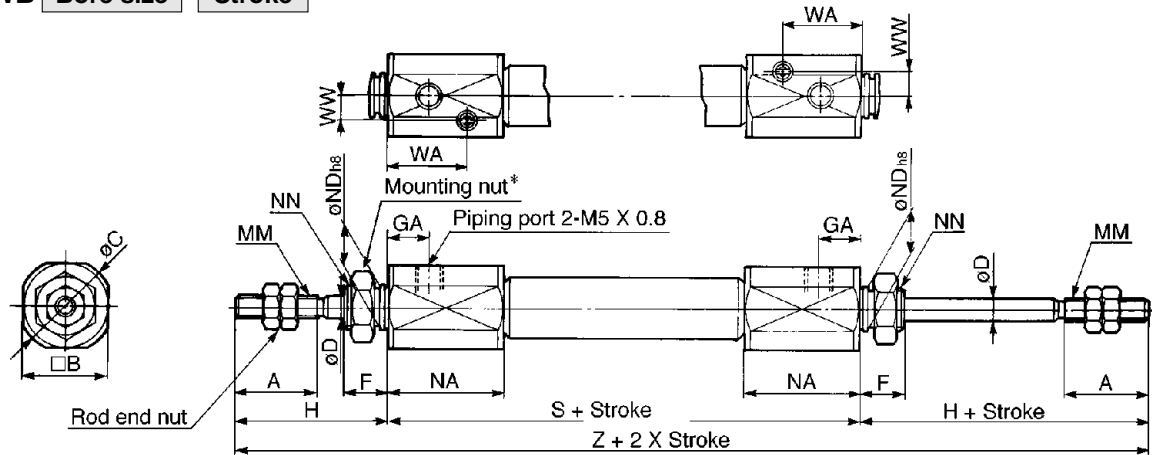
No.	Description	Material	Note
①	Rod cover	Aluminum alloy	White anodized
②	Cylinder tube	Stainless steel	
③	Piston rod	Stainless steel	
④	Piston	Brass	
⑤	Bumper	Urethane	
⑥	Speed controller needle	Stainless steel	
⑦	Steel ball	Bearing steel	
⑧	Mounting nut	Brass	Nickel plated

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

# Series CJ2ZW

## Basic (B)

CJ2ZWB Bore size Stroke

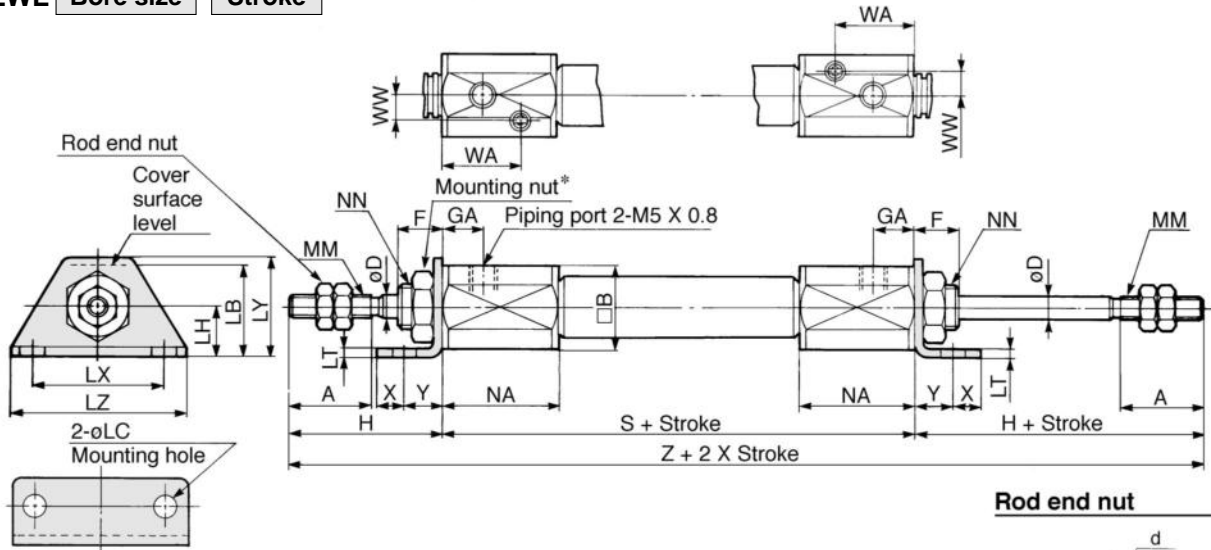


\* Refer to p.1.3-12 for details of the mounting nut.

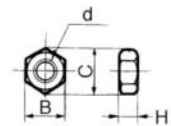
Bore	A	B	C	D	F	GA	H	MM	NA	NDh8	NN	S	WA	WW	Z
10	15	15	17	4	8	7.5	28	M4 X 0.7	21	8 <sub>-0.022</sub>	M8 X 1.0	66	14.5	4.5	122
16	15	18	20	5	8	7.5	28	M5 X 0.8	21	10 <sub>-0.022</sub>	M10 X 1.0	67	14.5	5.5	123

## Axial Foot (L)

CJ2ZWL Bore size Stroke



Rod end nut



Material: Iron

Part No.	Bore	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

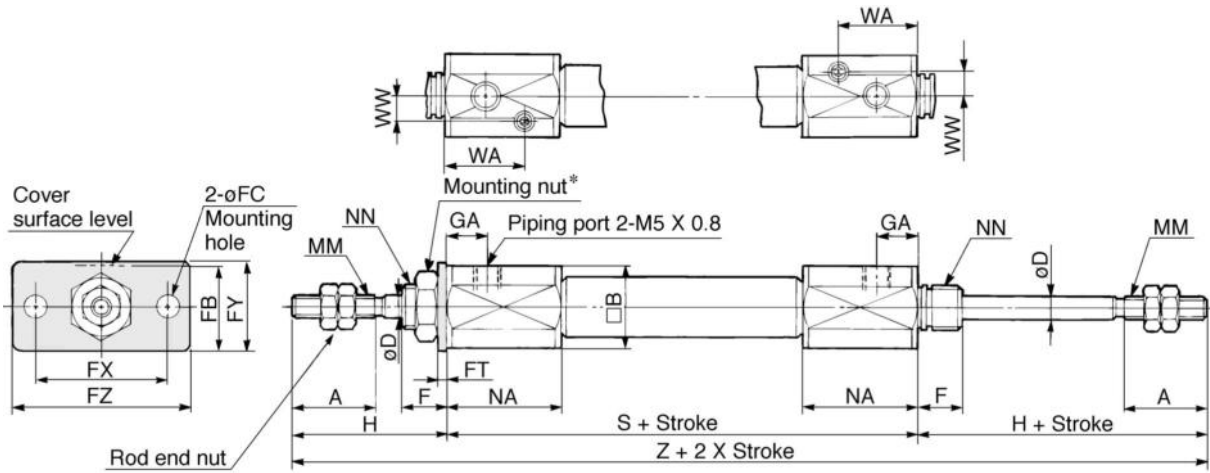
\* Refer to p.1.3-12 for details of the mounting nut.

Bore	A	B	D	F	LB	LC	LH	LT	LX	LY	LZ	GA	H	MM	NA	NN	S	WA	WW	X	Y	Z
10	15	15	4	8	16.5	4.5	9	1.6	24	16.5	32	7.5	28	M4 X 0.7	21	M8 X 1.0	66	14.5	4.5	5	7	122
16	15	18	5	8	23	5.5	14	2.3	33	25	42	7.5	28	M5 X 0.8	21	M10 X 1.0	67	14.5	5.5	6	9	123

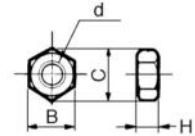
# Built-in Speed Controller: Double Acting Double Rod *Series CJ2ZW*

## Front Flange (F)

CJ2ZWF Bore size Stroke



### Rod end nut



Material: Iron

Part No.	Bore	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 p.1.3-12 for details of the mounting nut.

Bore	A	B	D	F	FB	FC	FT	FX	FY	FZ	GA	H	MM	NA	NN	S	WA	WW	Z
<b>10</b>	15	15	4	8	14.5	4.5	1.6	24	14	32	7.5	28	M4 X 0.7	21	M8 X 1.0	66	14.5	4.5	122
<b>16</b>	15	18	5	8	19	5.5	2.3	33	20	42	7.5	28	M5 X 0.8	21	M10 X 1.0	67	14.5	5.5	123

(mm)

- CJ1
- CJP
- CJ2**
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