

Air Cylinder: Standard Type Double Acting, Single Rod

Series CJ2

ø6, ø10, ø16

How to Order

Mounting style

B	Basic style
L	Axial foot style
F	Rod side flange style
D	Double clevis style (Except ø6)

Bore size

6	6 mm
10	10 mm
16	16 mm

Cylinder standard stroke (mm)
Refer to the standard stroke table on page 43.

Cushion

Nil	Rubber bumper
A	Air cushion (Except ø6)

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	CDJ2B10-45-A
	Band mounting style	CDJ2B16-60-B

* For rail mounting style, screws and nuts for 2 pcs switches come with the rail.
* Refer to page 123 for switch mounting brackets.

With auto switch

Band mounting style

Head cover port location

Bore size (mm)	ø6	ø10, ø16
Nil	—	Perpendicular to axis
R	Axial	Axial

* For configuration, refer to page 43.
* Double clevis is only available for being perpendicular to axis.

Auto switch

* For the applicable auto switch model, refer to the table below.
* If a built-in magnet cylinder without an auto switch is required, refer to the model of built-in magnet cylinder.

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

Applicable Auto Switch/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	Band mounting (ø6, ø10, ø16)	Rail mounting Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)		IC circuit	Relay, PLC			
Solid state switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9N	—	—	●	●	●	○	—	○			—	—	
							—	F7NV	F79	●	—	●	○	—	○					
				3-wire (PNP)	—	—	●	●	●	○	—	○	IC circuit							
		—		F7PV	F7P	●	—	●	○	—	○									
		2-wire		12 V	—	●	●	●	○	—	○	—								
		—		F7BV	J79	●	—	●	○	—	○									
	Diagnostic indication (2-color indication)	Grommet	Yes	3-wire (NPN)	24V	5 V, 12 V	—	M9NW	—	—	●	●	●	○	—	○	IC circuit	Relay, PLC		
								—	F7NWV	F79W	●	—	●	○	—	○				
		3-wire (PNP)		—	—	●	●	●	○	—	○	—								
		—		F7PW	—	●	—	●	○	—	○									
2-wire	12 V	—	●	●	●	○	—	○	—											
—	F7BWV	J79W	—	—	●	—	●	○		—	○									
Water resistant (2-color indication)	Grommet	Yes	2-wire	12 V	—	—	H7BA	F7BAV	F7BA	—	—	●	○	—	○	—				
—							H7NF	—	F79F	●	—	●	○	—	○					
With diagnostic output (2-color indication)	Grommet	Yes	4-wire (NPN)	5 V, 12 V	—	—	H7NF	—	F79F	●	—	●	○	—	○	IC circuit				
—							—	—	—	●	—	●	○	—	○					
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	5 V	—	A96	—	A76H	●	—	●	—	—	—	—	—			
							—	—	—	●	—	●	—	—	—					
							—	200 V	—	A72	A72H	●	—	●	—			—	—	
							—	100 V	—	A73	A73H	●	—	●	—			—		
							—	12 V	100 V or less	A93	—	—	—	—	—			—	IC circuit	
		—		—	—	A90	A80	A80H	●	—	●	—	—							
		Diagnostic indication (2-color indication)		Grommet	Yes	2-wire	24V	12 V	—	C73C	A73C	—	●	—	●	●	●	—	—	
										—	—	—	●	—	●	●	●	—		
										—	—	—	●	—	●	●	●	—		IC circuit
										—	24 V or less	—	C80C	A80C	—	—	—	—		
—	—		—							—	A79W**	—	—	—	—	—	—			

* Lead wire length symbols: 0.5 m..... Nil (Example) M9NW
 1 m..... M (Example) M9NWM
 3 m..... L (Example) M9NWL
 5 m..... Z (Example) M9NWZ
 None..... N (Example) H7CN

* Since there are other applicable auto switches than listed, refer to page 123 for details.
 * For details about auto switches with pre-wired connector, refer to pages 1328 and 1329.
 * Band mounting style is not available for D-A9□V/M9□V/M9□WV and D-M9□A(V)L types.
 ** "D-A79W" cannot be mounted on bore size ø10 cylinder with air cushion.

* Solid state auto switches marked with "○" are produced upon receipt of order.
 * D-A9□/M9□/M9□W/A7□□/A80□/F7□□/J7□□ auto switches are shipped together (not assembled). (However, when D-A9□/M9□/M9□W types are selected, only auto switch mounting brackets are assembled before being shipped.)
 * When D-A9□(V)/M9□(V)/M9□W(V) types are mounted on a ø10 or ø16 rail, order auto switch mounting brackets separately. Refer to page 123 for details.

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Specifications

Bore size (mm)		6	10	16
Action		Double acting, Single rod		
Fluid		Air		
Proof pressure		1 MPa		
Maximum operating pressure		0.7 MPa		
Minimum operating pressure	Rubber bumper	0.12 MPa	0.06 MPa	
	Air cushion	—	0.1 MPa	
Ambient and fluid temperature		Without auto switch: -10°C to 70°C, With auto switch: -10°C to 60°C*		
Cushion		Rubber bumper/Air cushion		
Lubrication		Not required (Non-lube)		
Stroke length tolerance		$\begin{matrix} +1.0 \\ 0 \end{matrix}$		
Piston speed	Rubber bumper	50 to 750 mm/s		
	Air cushion	50 to 1000 mm/s		
Allowable kinetic energy	Rubber bumper	0.012J	0.035J	0.090J
	Air cushion (Effective cushion length)	—	0.07J (9.4 mm)	0.18J (9.4 mm)

* No freezing

Standard Stroke

Bore size	Standard stroke (mm)
6	15, 30, 45, 60
10	15, 30, 45, 60, 75, 100, 125, 150
16	15, 30, 45, 60, 75, 100, 125, 150, 175, 200

* Manufacture of intermediate strokes at 1 mm intervals is possible. (Spacers are not used.)

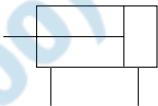
Refer to pages 117 to 123 for cylinders with auto switches.

- Minimum stroke for auto switch mounting
- Proper auto switch mounting position (detection at stroke end) and mounting height
- Operating range
- Switch mounting bracket part no.



JIS Symbol

Double acting, Single rod



Head Cover Port Location

Either perpendicular to the cylinder axis or in-line with the cylinder axis is available for basic style. (ø6 is available only as in-line style.)



Axial

Perpendicular



Made to Order Specifications

(For details, refer to pages 1373 to 1498.)

Symbol	Specifications
—XA□	Change of rod end shape
—XB6	Heat resistant cylinder (150°C) * Not available with switch & with air cushion
—XB7	Cold resistant cylinder * Not available with switch & with air cushion
—XB9	Low speed cylinder (10 to 50 mm/s) * Not available with air cushion
—XB13	Low speed cylinder (5 to 50 mm/s) * Not available with air cushion
—XC3	Special port location * Not available with air cushion
—XC8	Adjustable stroke cylinder/Adjustable extension type
—XC9	Adjustable stroke cylinder/Adjustable retraction type
—XC10	Dual stroke cylinder/Double rod type
—XC11	Dual stroke cylinder/Single rod type
—XC22	Fluororubber seals * Not available with air cushion
—XC51	With hose nipple

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

CS2

D-□

-X□

Individual
-X□

Technical
data