


Low Friction: Double Acting Single Rod

Series CJ2Q



ø10, ø16

How to Order



Bore size

10	10mm
16	16mm

Mounting

B	Basic
L	Axial foot
F	Front flange
D	Double clevis

Standard stroke (mm)

ø10	15, 30, 45, 60, 75, 100, 125, 150
ø16	15, 30, 45, 60, 75, 100, 125, 150, 175, 200

Standard CJ2Q L 16 60

With auto switch CDJ2Q L 16 60 C73

With auto switch (Built-in magnet)

Port location on head cover

Symbol	Port location
—	Perpendicular
R	In-line

* Refer to p.1.3-54 for the configuration.

Auto switch

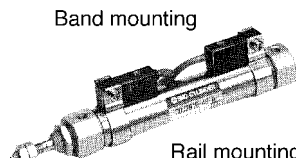
* Refer to the table below for selecting applicable auto switches.

* If requiring a built-in magnet cylinder without an auto switch, refer to the model number example below.

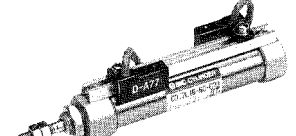
Number of switches

—	2
S	1
n	n

Band mounting



Rail mounting



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	Rail		0.5 (-)	3 (L)	5 (Z)	None (N)				
Reed switch	—	Grommet	Yes	3 wire (NPN)	—	5V	—	C76	—	A76H	●	●	—	—	Relay PLC		
				2 wire	—	200V	—	A72	A72H	●	●	—	—				
					12V	100V	C73	A73	A73H	●	●	●	—				
					5V, 12V	≤100V	C80	A80	A80H	●	●	—	—				
					12V	—	C73C	A73C	—	●	●	●	●				
				5V, 12V	≤24V	C80C	A80C	—	●	●	●	●					
Diagnostic indication (2 color)	Grommet	Yes	—	—	—	A79W	—	●	●	—	—						
Solid state switch	—	Grommet	Yes	3 wire (NPN)	5V, 12V	—	H7A1	F7NV	F79	●	●	○	—	Relay PLC			
				3 wire (PNP)						H7A2	F7PV	F7P	●		●	○	—
				2 wire						H7B	F7BV	J79	●		●	○	—
		Connector		H7C						J79C	—	●	●		●	●	
				3 wire (NPN)						H7NW	F7NWV	F79W	●		●	○	—
				3 wire (PNP)						H7PW	—	F7PW	●		●	○	—
	Diagnostic indication (2 color)	Grommet	Yes	2 wire	12V	—	H7BA	—	F7BA	—	●	○	—				
				3 wire (NPN)						—	—	F7NT	—	●	○	—	
				5V, 12V						H7NF	—	F79F	●	●	○	—	
				4 wire (NPN)						H7LF	—	F7LF	●	●	○	—	
				With timer						—	—	—	—	—	—	—	—
				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	CDJ2QB16-60-A
	Band mounting	CDJ2QB10-45-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.

Low Friction Style: Double Acting Single Rod *Series CJ2Q*

Specially designed to keep friction of the piston to a minimum. Suitable for contact-pressure control requiring smooth operation at low pressures.

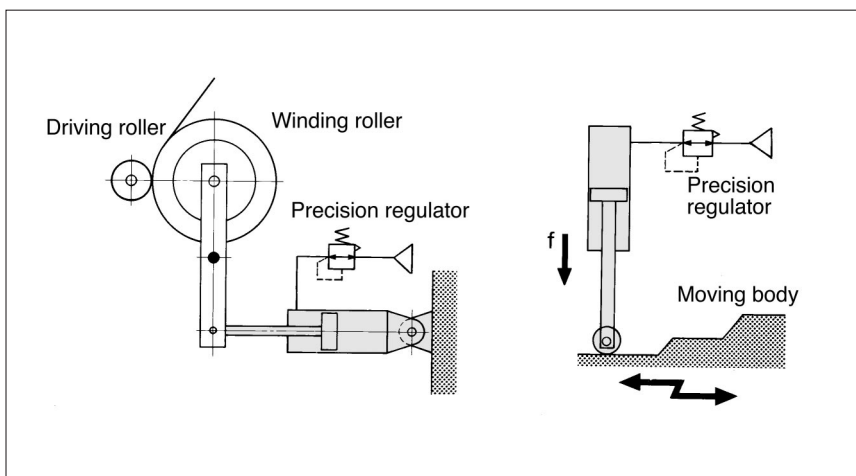
Low Friction

Min. operating pressure: 0.03MPa



Application Example

The low friction cylinder should be used with precision regulator (e.g. Series IR).



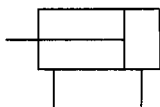
Specifications

Action	Double acting/Single rod	
Fluid	Air	
Proof pressure	1.05MPa	
Max. operating pressure	0.7MPa	
Min. operating pressure	0.03MPa	
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	
Bore size (mm)	ø10, ø16	
Mounting	Basic, Axial foot, Front flange, Double clevis	
Piston speed	50 to 750mm/s	
Allowable kinetic energy	ø10	0.035J
	ø16	0.090J

* No freezing

JIS symbol

Double acting/Single rod



Precautions

Refer to p.0-39 to 0-46 before handling.

Minimum Stroke for Auto Switch Mounting

•Refer to p.1.3-3.

Standard Stroke (mm)

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

CJ1

CJP

CJ2

CM2

C85

CG1

MB

C95

CA1

CS1

Series CJ2Q

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

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

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

Mounting Bracket Part No.

Mounting bracket	Bore size (mm)	
	10	16
Foot	CJ-L010B	CJ-L016B
Flange	CJ-F010B	CJ-F016B
T bracket*	CJ-T010B	CJ-T016B

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

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	



Note) A set of stainless steel mounting screws "BBA4" is attached. (A switch mounting band is not attached. Please order the band separately.) "BBA4" screws are used for D-C7/C8/H7. "D-H7BAL" switch is set on the cylinder with the screws above when shipped. Also, when a switch only is shipped, "BBA4" screws are attached.

Port Location on Head Cover

Either perpendicular to the cylinder axis or in-line with the cylinder axis is available for basic style.

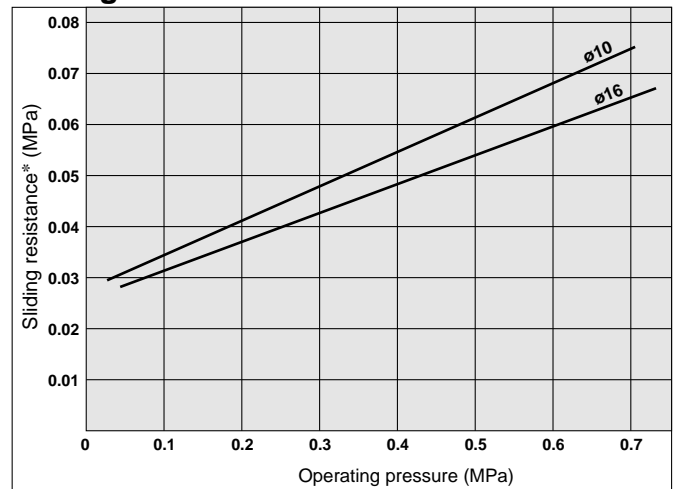


In-line



Perpendicular

Sliding Resistance at the Low Friction Side



* Converted to cylinder operating pressure.

Weight

(g)

Bore size (mm)		10	16
Basic weight*		24	55
Additional weight for each 15 of stroke		4	6.5
Mounting bracket weight	Axial foot	8	20
	Front flange	5	15
	Double clevis** (with pins)	4	10

* This basic weight includes weights of mounting nut and rod end nut.

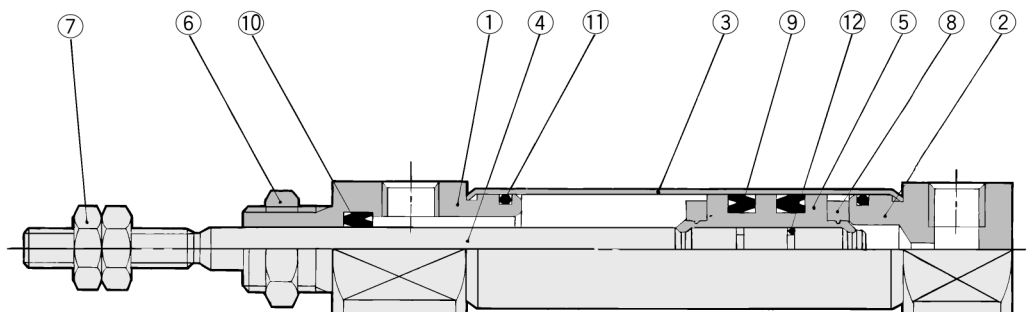
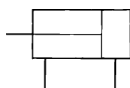
** The mounting nut is not attached to the double clevis style, so the mounting nut weight is already reduced.

Calculation example) CJ2QL10-45

- Basic weight 24 (ø10)
 - Additional weight 4/15 stroke
 - Cylinder stroke 45 stroke
 - Mounting bracket weight 8 (Axial foot)
- 24+4/15 X 45+8=44g

Low Friction Style: Double Acting Single Rod *Series CJ2Q*

Construction (The cylinder cannot be disassembled.)



Component Parts

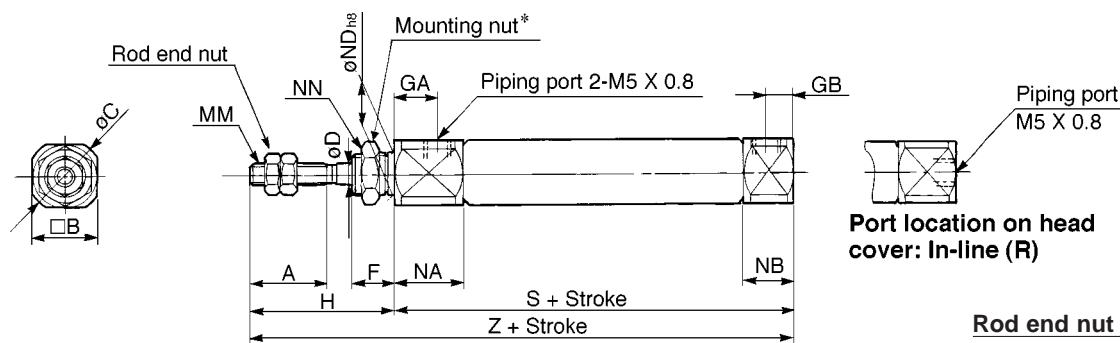
No.	Description	Material	Note
①	Rod cover	Aluminum alloy	White anodized
②	Head cover	Aluminum alloy	White anodized
③	Cylinder tube	Stainless steel	
④	Piston rod	Stainless steel	
⑤	Piston	Brass	
⑥	Mounting nut	Brass	Nickel plated

No.	Description	Material	Note
⑦	Rod end nut	Rolled steel	Nickel plated
⑧	Bumper	Urethane	
⑨	Piston seal	NBR	
⑩	Rod seal	NBR	
⑪	Tube gasket	NBR	
⑫	Piston gasket	NBR	

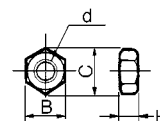
- CJ1
- CJP
- CJ2**
- CM2
- C85
- CG1
- MB
- C95
- CA1
- CS1

Basic Style (B)

CJ2QB Bore size Stroke Port location on head cover



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	C	D	F	GA	GB	H	MM	NA	NB	ND	NN	S	Z
10	15	12	14	4	8	8	5	28	M4 X 0.7	12.5	9.5	8 ⁰ _{-0.022}	M8 X 1.0	46	74
16	15	18	20	5	8	8	5	28	M5 X 0.8	12.5	9.5	10 ⁰ _{-0.022}	M10 X 1.0	47	75

Refer to p.1.3-8 to 1.3-10 for dimensions of each mounting bracket.

	Basic	Foot	Front flange	Double clevis
	JT2Q□10 SCJ210, #1	SCJ210, #1, #3	SCJ210, #1, #9	SCJ210, #5
	JT2Q□16 SCJ216, #1	SCJ216, #1, #3	SCJ216, #1, #9	SCJ216, #5

* The data shows auto switch equipped styles.

Please delete the unnecessary parts.