


Air Cylinder

Series CJ1

Double Acting: $\phi 4$ /Single Acting, Spring Return: $\phi 2.5, \phi 4$

Series Variations

Series	Action	Bore size (mm)	Cylinder standard stroke (mm)	Page	
Standard Series CJ1 	Double acting	Single rod	4	5, 10, 15, 20	P.16
	Single acting	Single rod Spring return	2.5 4	5, 10 5, 10, 15, 20	P.18

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

CS2

D-□

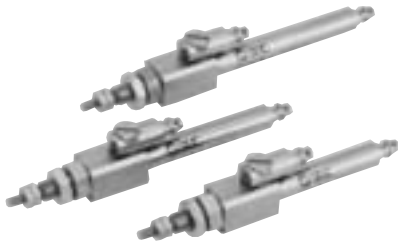
-X□

Individual
-X□

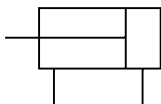
Technical
data

Double Acting Series CJ1

Bore Size: $\varnothing 4$



JIS Symbol
Double acting,
Single rod



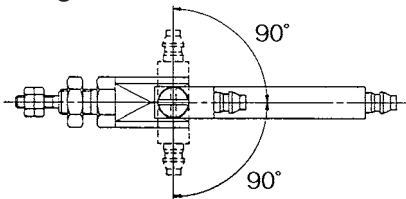
Formation of small series of a double acting cylinder

(A cylinder with $\varnothing 4$ bore has been added as a compact type to the existing CJ2: $\varnothing 6$ double acting cylinder.)

The fitting on the rod cover side has been provided with a variable piping direction.

(The piping direction of the fitting on the rod cover side can move freely within a range of $\pm 90^\circ$.)

■ The piping direction of the fitting on the rod cover side varies within a range of $\pm 90^\circ$.



⚠ Precautions

Be sure to read before handling. Refer to front matters 54 and 55 for Safety Instructions and pages 3 to 11 for Actuator and Auto Switch Precautions.

Piping

⚠ Caution

1. Do not force to connect piping in such a way that the lateral force could be applied on a cylinder tube. This could cause a cylinder tube to slant and malfunction.

Piping

⚠ Caution

1. Do not install by directly grasping the cylinder tube, as this could cause a tube to deform and malfunction.
2. Do not install it by directly grasping the piston rod with a pair of electrician's pliers. Scratches on the piston rod would cause a bearing or rod seal to get damaged, malfunction, and leak air.

How to Order/Double Acting

CJ1B4-5U4

● **Mounting style**

B Basic style

● **Bore size**

4 4 mm

● **Applicable tubing**

Symbol	Tubing material	Size	
		O.D.	Bore size
U4	Polyurethane	4 mm	2.5 mm
	Soft nylon	4 mm	2.5 mm

● **Standard stroke (mm)**

5, 10, 15, 20

Specifications

Action	Double acting, Single rod
Fluid	Air
Proof pressure	1.05 MPa
Maximum operating pressure	0.7 MPa
Minimum operating pressure	0.2 MPa
Ambient and fluid temperature	-10 to 70°C (No freezing)
Piston speed	50 to 500 mm/s
Cushion	None
Stroke length tolerance	$^{+0.5}_0$ mm
Mounting	Basic style
Lubrication	Not required (Non-lube)

Model/Bore Size/Standard Stroke

Model	Bore size (mm)	Standard stroke (mm)
CJ1B4	4	5, 10, 15, 20

Applicable Tubing

Tubing type	Material	Size		Tube no.
		O.D.	Bore size	
Metric size	Polyurethane	4 mm	2.5 mm	TU0425
	Soft nylon	4 mm	2.5 mm	TS0425

Theoretical Output

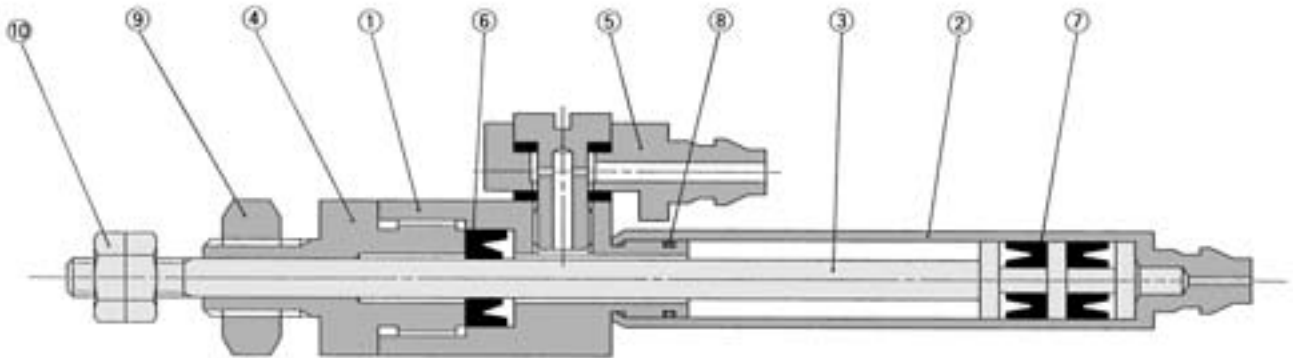
Bore size (mm)	Rod size (mm)	Action	Piston area (mm ²)	Operating pressure (MPa)					
				0.2	0.3	0.4	0.5	0.6	0.7
4	2	OUT	12.6	2.52	3.78	5.04	6.30	7.56	8.82
		IN	9.4	1.88	2.82	3.76	4.70	5.64	6.58

Mass

(g)

Bore size (mm)	Cylinder stroke (mm)	Mass
4	5	12.0
	10	12.4
	15	12.8
	20	13.2

Construction

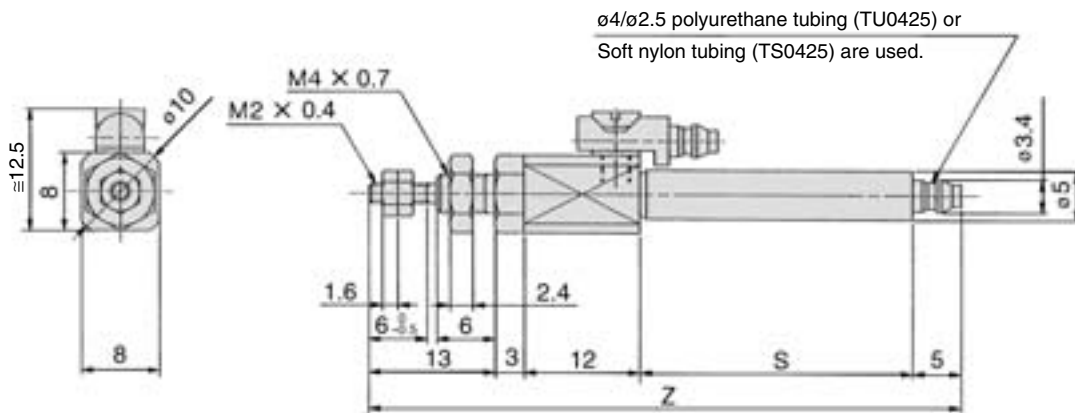


Component Parts

No.	Description	Material	Note
1	Rod cover	Brass	Electroless nickel plated
2	Cylinder tube	Brass	Electroless nickel plated
3	Piston	Stainless steel	
4	Seal retainer	Brass	Electroless nickel plated
5	Fittings	Body Brass	Electroless nickel plated
		Gasket PVC	
6	Rod seal	NBR	
7	Piston seal	NBR	
8	Tube gasket	NBR	
9	Mounting nut	Steel	Nickel plated
10	Rod end nut	Steel	Nickel plated

- CJ1**
- CJP**
- CJ2**
- CM2**
- CG1**
- MB**
- MB1**
- CA2**
- CS1**
- CS2**

Dimensions: Double Acting, Basic Style



Symbol Bore size (mm) \ Stroke	S				Z			
	5	10	15	20	5	10	15	20
4	18	23	28	33	51	56	61	66

- D-□**
- X□**
- Individual
-X□
- Technical
data

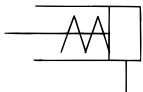
Single Acting: Spring Return

Series CJ1

Bore Size: $\varnothing 2.5, \varnothing 4$



JIS Symbol
Single acting, Spring return



Spring Force (N)

Bore size (mm)	Retracted side	Extended side
2.5	1.13	0.64
4	3.04	1.47

Mass (g)

Bore size (mm)	5	10	15	20
2.5	1.5	2	—	—
4	3.7	4.6	5.6	6.5



Precautions

Be sure to read before handling.
Refer to front matters 54 and 55 for
Safety Instructions and pages 3 to 11 for
Actuator and Auto Switch Precautions.

Piping

Caution

- Do not force to connect piping in such a way that the lateral force could be applied on a cylinder tube. This could cause a cylinder tube to slant and malfunction.
Because this could cause a cylinder tube to tilt and malfunction.

Piping

Caution

- Do not use it in such a way that a load could be applied to the piston rod during the retraction.
The spring that is built into the cylinder provides only enough force to retract the piston rod. Thus, if a load is applied, the piston rod will not be able to retract to the end of the stroke.
- Do not install it by directly grasping the cylinder tube, as this could cause a tube to deform and malfunction.

How to Order/Single Acting

CJ1B 4 - 10 S U4

Mounting style
B Basic style

Bore size

2	2.5 mm
4	4 mm

Standard stroke (mm)

$\varnothing 2.5$	5, 10
$\varnothing 4$	5, 10, 15, 20

Applicable tubing

Symbol	Tubing material	Size	
		O.D.	Bore size
U4	Polyurethane	4 mm	2.5 mm
	Soft nylon	4 mm	2.5 mm

Single acting, Spring return

Specifications

Action	Single acting, Spring return
Fluid	Air
Proof pressure	1.05 MPa
Maximum operating pressure	0.7 MPa
Minimum operating pressure	0.3 MPa
Ambient and fluid temperature	-10 to 70°C (No freezing)
Piston speed	50 to 500 mm/s
Cushion	None
Stroke length tolerance	$^{+0.5}_0$ mm
Mounting	Basic style
Lubrication	Not required (Non-lube)

Model/Bore Size/Standard Stroke

Model	Bore size (mm)	Standard stroke (mm)
CJ1B2	2.5	5, 10
CJ1B4	4	5, 10, 15, 20

Applicable Tubing

Tubing type	Material	Size		Model no.
		O.D.	Bore size	
Metric size	Polyurethane	4 mm	2.5 mm	TU0425
	Soft nylon	4 mm	2.5 mm	TS0425

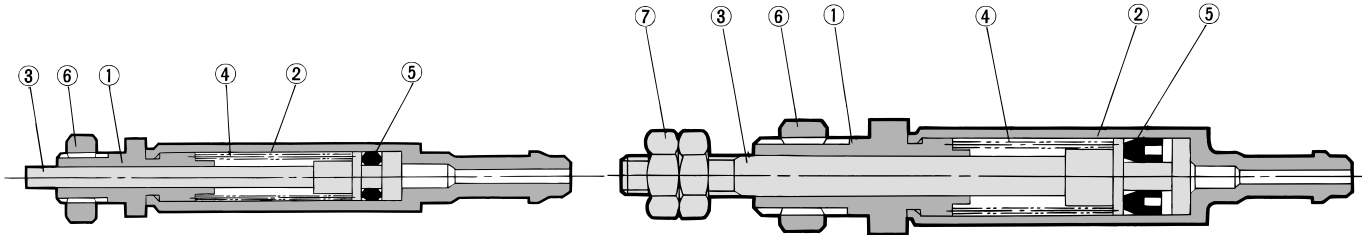
Theoretical Output (N)

Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm ²)	Operating pressure (MPa)				
				0.3	0.4	0.5	0.6	0.7
2.5	1	OUT	4.9	0.34	0.83	1.32	1.81	2.30
		IN	—	0.64				
4	2	OUT	12.6	0.74	2.00	3.26	4.52	5.78
		IN	—	1.47				

Construction (Not able to disassemble)

CJ1B2-□SU4

CJ1B4-□SU4

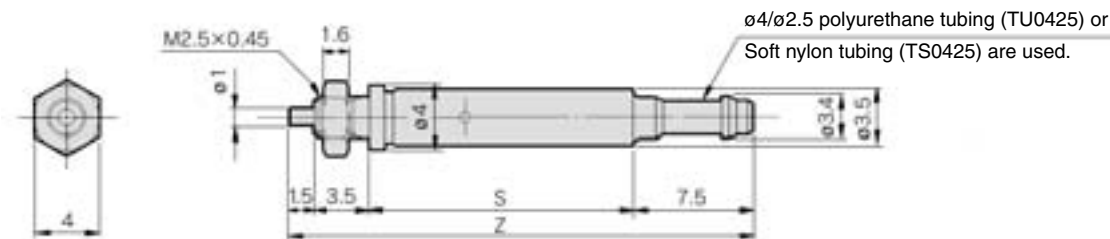


Component Parts

No.	Description	Material	Note
1	Rod cover	Brass	Electroless nickel plated
2	Cylinder tube	Brass	Electroless nickel plated
3	Piston rod	Stainless steel	
4	Spring	Stainless steel wire	
5	Piston seal	NBR	
6	Mounting nut	Brass	Black zinc chromated
7	Rod end nut	Steel	Electroless nickel plated

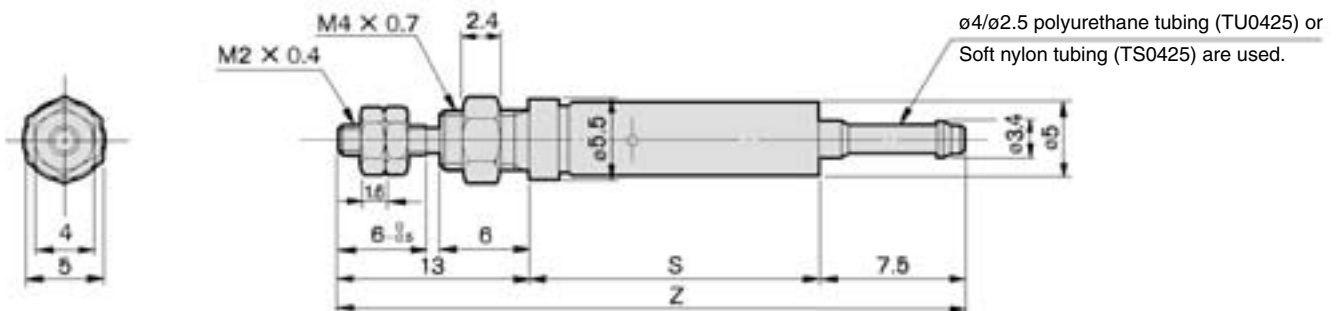
Basic Style

Bore size: $\phi 2.5$ /CJ1B2-□SU4



Bore size (mm)	Symbol Stroke	S		Z	
		5	10	5	10
2.5		16.5	25.5	29	38

Bore size: $\phi 4$ /CJ1B4-□SU4



Bore size (mm)	Symbol Stroke	S				Z			
		5	10	15	20	5	10	15	20
4		19.5	28.5	37.5	46.5	40	49	58	67