



ALMOTION

Air Cylinder

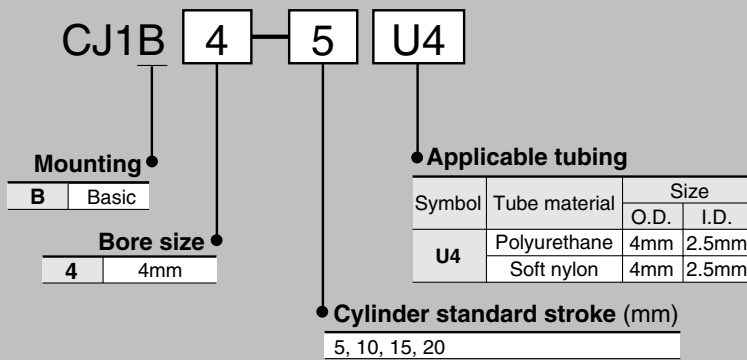
Series CJ1

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

Variations

Series	Action	Bore size (mm)	Standard stroke (mm)	Page	
Standard Series CJ1 	Double acting	Single rod	4	5, 10, 15, 20	1-6
	Single acting	Single rod Spring return	2.5 4	5, 10 5, 10, 15, 20	1-8

How to Order/Double Acting

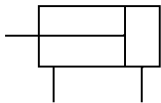
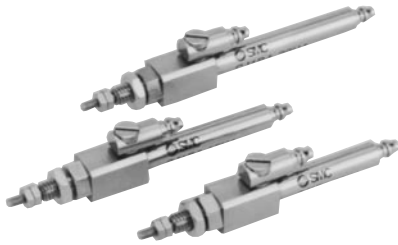


Refer to p.1-8 for single acting style.

Air Cylinder/Double Acting

Series CJ1

ø4



Symbol
Double acting/Single rod

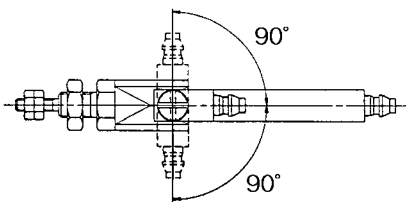
Compact series of double acting cylinders

(A cylinder with a ø4 bore has been added as a compact style to the existing CJ2: ø6 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 ±90°.)

■The piping direction of the fitting on the rod cover side varies within a range of ±90°.



Specifications

Action	Double acting single rod
Fluid	Air
Proof pressure	1.05MPa
Max. operating pressure	0.7MPa
Min. operating pressure	0.2MPa
Ambient and fluid temperature	-10°C to 70°C (Non-freezing)
Operating piston speed	50 to 500mm/s
Cushion	None
Thread tolerance	JIS class 2
Stroke tolerance	+0.5 0
Mounting	Basic style
Lubrication	Not required (Non-lube)

Model/Cylinder Bore Size/Standard Strokes

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

Applicable Tubing

Tubing	Material	Size		Model No.
		O.D.	I.D.	
Metric size	Polyurethane	4mm	2.5mm	TU0425
	Soft nylon	4mm	2.5mm	TS0425

Theoretical Force

(N)

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

Weight

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

⚠ Precaution

Piping

⚠ Caution

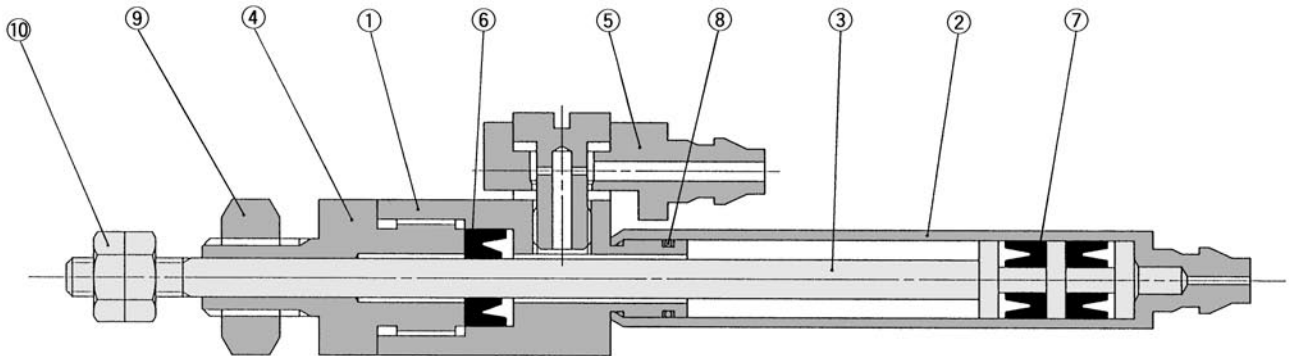
- Do not forcibly connect piping that could apply a lateral force to the cylinder tube, this could cause the cylinder tube to tilt and lead to a malfunction.

Mounting

⚠ Caution

- Do not install by directly grasping the cylinder tube, as this could cause the tube to deform and lead to a malfunction.
- Do not install by grasping the piston rod with a pair of electrician's pliers, as this could scratch the piston rod, which could damage the bearing or the rod seal. As a result, it could lead to a malfunction or air leakage.

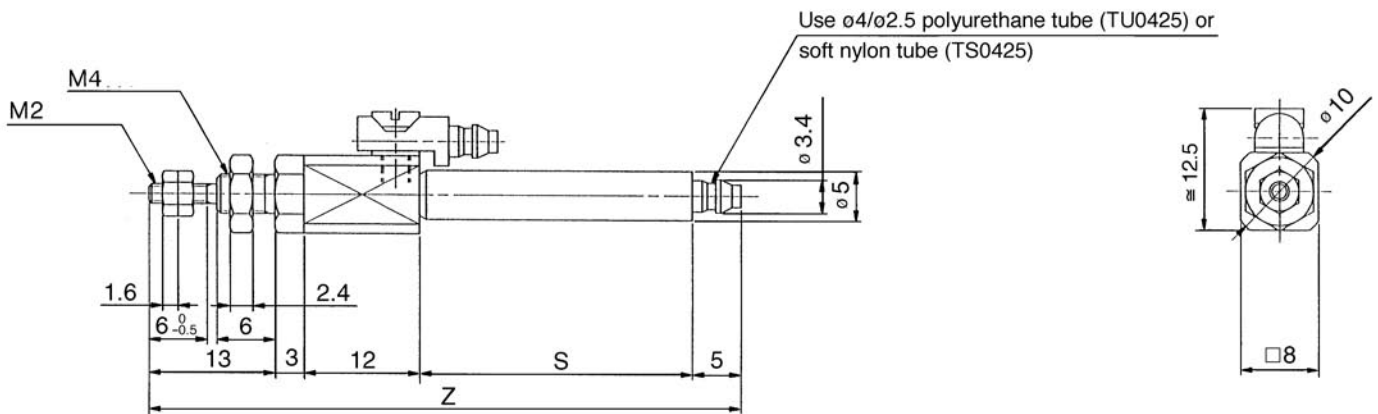
Construction



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

Dimensions: Double Acting/Basic style



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

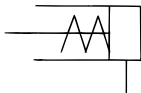
Air Cylinder/Single Acting (Spring Return)

Series CJ1

ø2.5, ø4



Symbol
Single acting/Spring return



Spring Retracting Force (N)

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

Weight (g)

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

⚠ Precautions

Piping

⚠ Caution

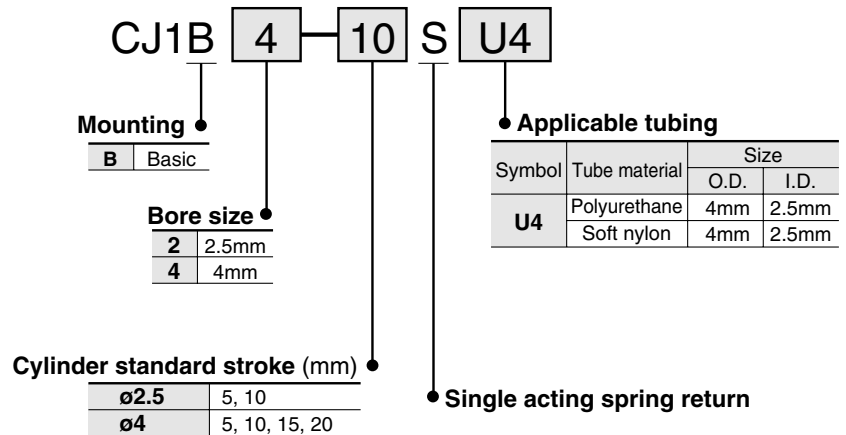
- Do not forcibly connect piping that could apply a lateral force to the cylinder tube, as this could cause the cylinder tube to tilt and lead to a malfunction.

Mounting

⚠ Caution

- Do not operate with a load applied to the piston rod during 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 by grasping the cylinder tube, as this could cause the tube to deform and lead to a malfunction.

How to Order/Single Acting



Specifications

Action	Single acting spring return
Fluid	Air
Proof pressure	1.05MPa
Max. operating pressure	0.7MPa
Min. operating pressure	0.3MPa
Ambient and fluid temperature	-10 to 70°C (Non-freezing)
Operating piston speed	50 to 500mm/s
Cushion	None
Thread tolerance	JIS 2 class
Stroke tolerance	+0.5 0
Mounting	Basic style
Lubrication	Not required (Non-lube)

Model/Cylinder Bore Size/Standard Strokes

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

Applicable Tubing

Tubing	Material	Size		Model No.
		O.D.	I.D.	
Metric size	Polyurethane	4mm	2.5mm	TU0425
	Soft nylon	4mm	2.5mm	TS0425

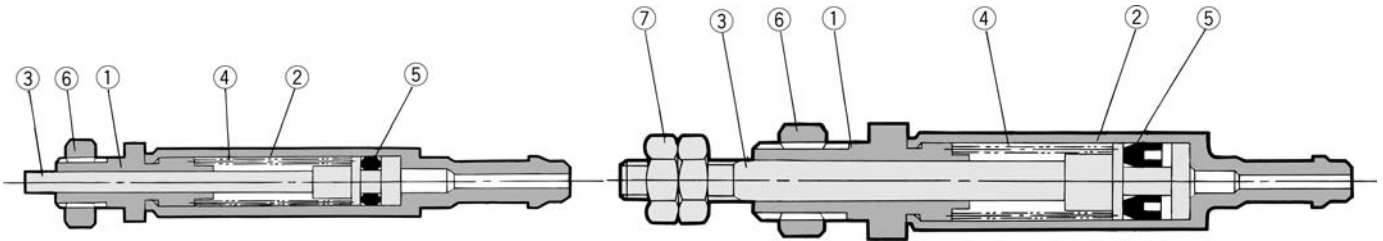
Theoretical Force (N)

Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm ²)	Operating pressure				
				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

CJ1B2-□SU4

CJ1B4-□SU4



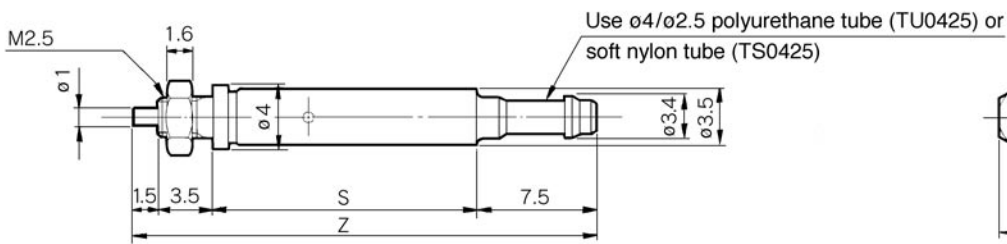
Component Parts

(Impossible to disassemble)

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 chromate
⑦	Rod end nut	Steel	Electroless nickel plated

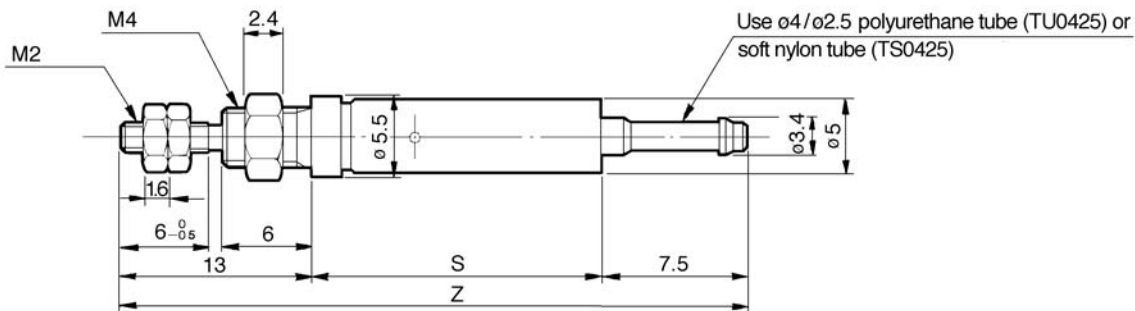
Dimensions: Basic style

Bore size: ø2.5/CJ1B2-□SU4



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

Bore size: ø4/CJ1B4-□SU4



Bore (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

