


Air Cylinder

CJ1 Series

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

Series Variations

| Series | Action | | Bore size (mm) | Cylinder standard stroke (mm) | Page |
|---|---------------|-----------------------------|----------------|-------------------------------|------|
| Standard CJ1 Series  | 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

JCM

CM2

CM3

CG1

CG3

JMB

MB

MB1

CA2

CS1

CS2

D-□

-X□

Technical
Data

Air Cylinder Single Acting: Spring Return

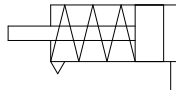
CJ1 Series

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



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 |

Weight

(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 this before handling the products. Refer to back page 50 for Safety Instructions and pages 3 to 12 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.

Mounting

⚠ 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 type

B Basic type

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 type |
| 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

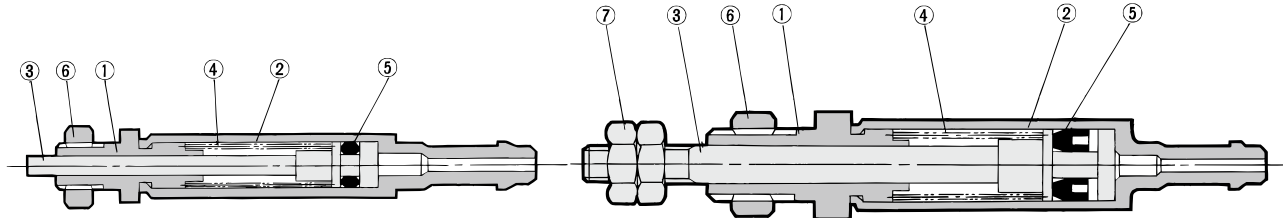
(N)

| 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

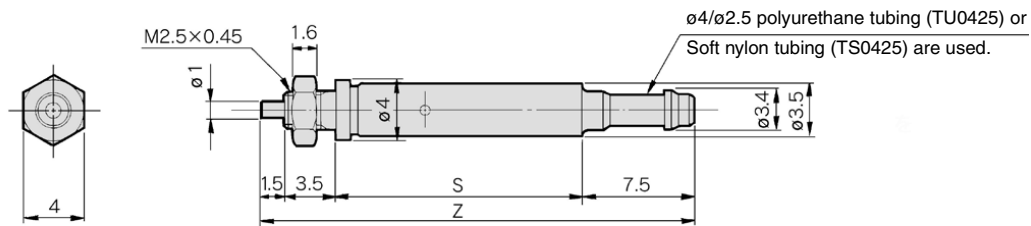


Component Parts

| 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 | Zinc chromated |

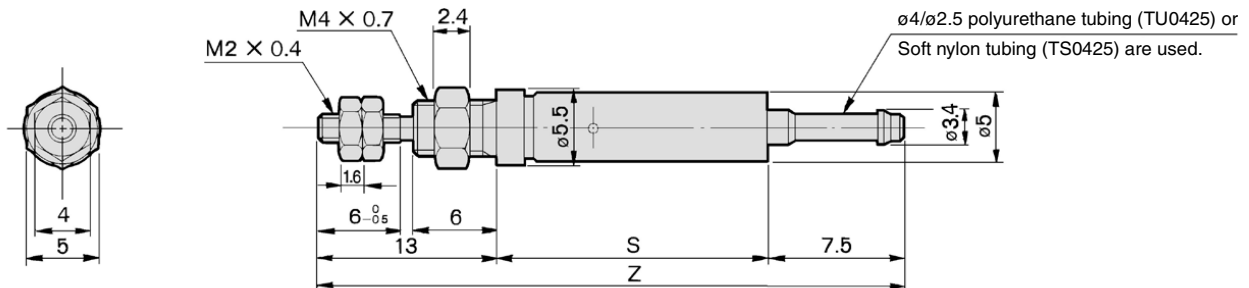
Basic Type

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 |

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