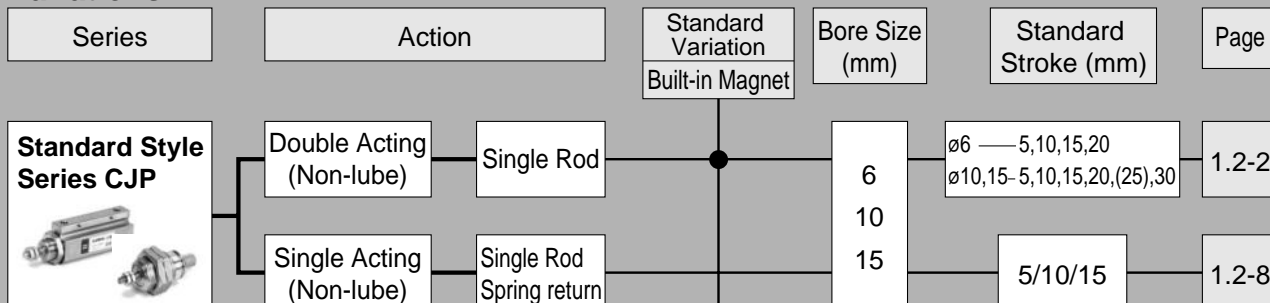


Pin Cylinder Series CJP

Double Acting/Single Acting Spring Return

Variations



CJ1

CJP

CJ2

CM2

C85

CG1

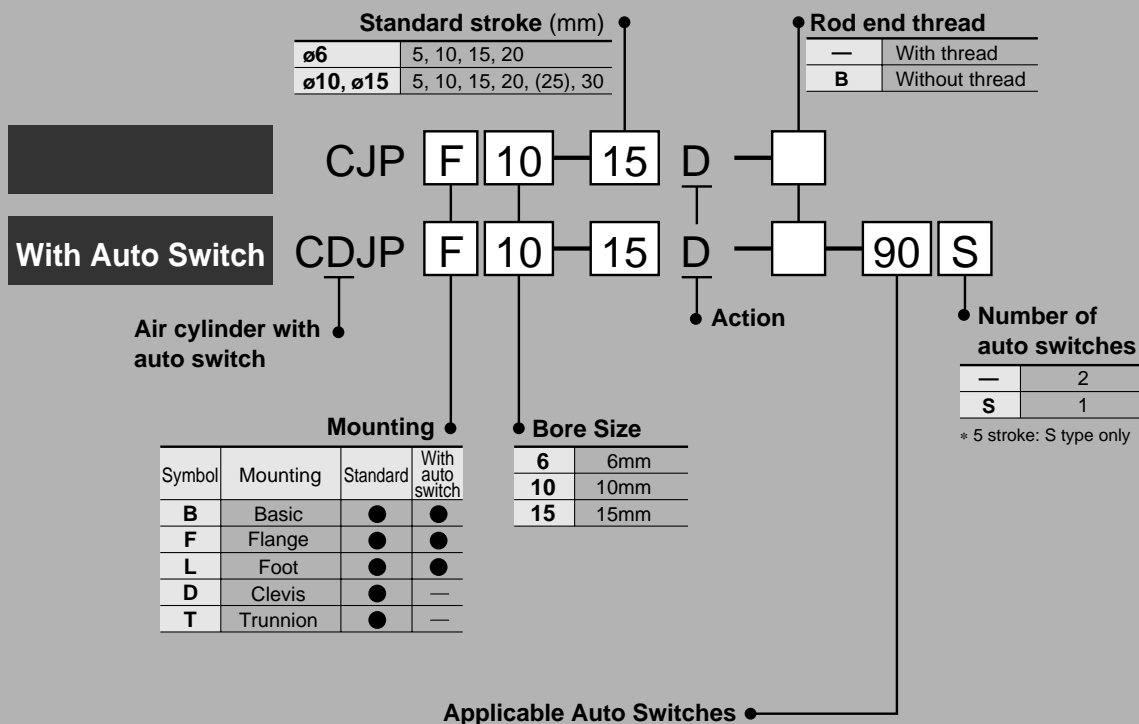
MB

C95

CA1

CS1

How to Order/Double Acting



Applicable Auto Switches

| Electrical entry | Indicator | Wiring (Output) | Load voltage | | Auto switch model No. | Lead wire | Length of lead wire (m) | | | Applicable load | |
|------------------|-----------|-----------------|--------------|-----|-----------------------|-----------|-------------------------|-------|-------|-----------------|------------|
| | | | DC | AC | | | 0.5 (—) | 3 (L) | 5 (Z) | Relay PLC | IC circuit |
| Grommet | Yes | 2 wire | 24V | 12V | — | 97 | Parallel code | ● | ● | | |
| | | | | 12V | 100V | 93A | Cab tire | ● | ● | ● | |
| | No | 2 wire | 24V | 5V | 24 V or less | 90 | Parallel code | ● | ● | ● | IC circuit |
| | | | | 5V | 100 V or less | 90A | Cab tire | ● | ● | ● | |

* Impossible to mount the auto switch on the clevis and trunnion styles.

Pin Cylinder/Double Acting Single Rod

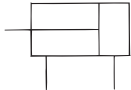
Series CJP



ø6, ø10, ø15

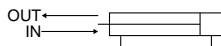


Symbol
Double acting/Single rod



Cylinder Theoretical Force (N)

| Bore size (mm) | Action | Operating Pressure (MPa) | | |
|----------------|--------|--------------------------|------|------|
| | | 0.3 | 0.5 | 0.7 |
| 6 | IN | 6.36 | 10.6 | 14.8 |
| | OUT | 8.48 | 14.1 | 19.8 |
| 10 | IN | 17.7 | 29.4 | 41.2 |
| | OUT | 23.6 | 39.3 | 55.0 |
| 15 | IN | 44.5 | 74.2 | 104 |
| | OUT | 53.0 | 88.3 | 124 |



Precautions

Be sure to read before handling.
Refer to p.0-39 to 0-46 for Safety
Instructions and common precautions.

Detachment of snap ring

Caution

- To replace seals or to grease the cylinder during maintenance, use an appropriate pair of pliers (tool for installing a C type hole snap ring). After re-installing the cylinder, make sure that the snap ring is placed securely in the groove before supplying air.
- To remove and install the snap ring for the knuckle pin or the clevis pin, use an appropriate pair of pliers (tool for installing a C type hole snap ring). In particular, use a pair of ultra-mini pliers, such as the Super Tool CSM-07A, for removing and installing the snap rings on the ø6 cylinder.

1.2-2

Specifications

| | | |
|-------------------------------|---------------------------------------------------------------|---------|
| Action | Double acting | |
| Max. operating pressure | 0.7MPa | |
| Min. operating pressure | ø6 | 0.12MPa |
| | ø10, ø15 | 0.06MPa |
| Proof pressure | 1.05MPa | |
| Ambient and fluid temperature | w/o auto switch: -10°C to 70°C, w/auto switch: -10°C to 60°C* | |
| Lubrication | Not required | |
| Stroke tolerance | +1.0 0 | |
| Thread tolerance | JIS class 2 | |
| Rod end thread | With thread/Without thread | |
| Operating piston speed | 50 to 500mm/s | |
| Cushion | Rubber bumper at both ends | |
| Mounting | Basic, Flange, Foot, Clevis, Trunnion | |

* Non-freezing

Standard Accessories

| Accessories Mounting | Mounting | | |
|-------------------------|------------------|-----------------|---------------------|
| | Mounting nut (1) | Rod end nut (2) | Trunnion (with pin) |
| Basic | ● | ● | — |
| Flange | ● | ● | — |
| Foot | ● | ● | — |
| Clevis | — | ● | — |
| Trunnion | — | ● | ● |

Options

| Part | Bore | | |
|---------------------------------|--------------------------|--------|--------|
| | 6 | 10 | 15 |
| Auto switch* | D-90, D-97, D-90A, D-93A | | |
| Single knuckle joint | I-P006 | I-P010 | I-P015 |
| Double knuckle joint (with pin) | Y-P006 | Y-P010 | Y-P015 |

* 5mm stroke is with one switch.
Auto switch can not be installed with the clevis or trunnion.

Mounting Bracket Part No.

| Mounting | Bore (mm) | | |
|---------------------|-----------|---------|---------|
| | 6 | 10 | 15 |
| Flange | CP-F006 | CP-F010 | CP-F015 |
| Foot | CP-L006 | CP-L010 | CP-L015 |
| Trunnion (with pin) | CP-T006 | CP-T010 | CP-T015 |

Switch Mounting Bracket

| Switch model | Mounting bracket Part No. | Applicable cylinder bore (mm) |
|----------------------|---------------------------|-------------------------------|
| D-90,97 D-90A,93A | BP-1 | 6, 10, 15 |

Basic

| Bore size (mm) | Stroke (mm) |
|----------------|--------------------------|
| 6 | 5, 10, 15, 20 |
| 10 | 5, 10, 15, 20, (25)*, 30 |
| 15 | 5, 10, 15, 20, (25)*, 30 |

* 5mm spacer is added to the 30mm stroke cylinder.

Weight/Cylinder (g)

| Mounting style | Stroke | Bore size (mm) | | |
|----------------|---------------------|----------------|----|-----|
| | | 6 | 10 | 15 |
| Standard | 5 | 44 | 60 | 99 |
| | 10 | 50 | 66 | 108 |
| | 15 | 56 | 73 | 118 |
| | 20 | 62 | 79 | 127 |
| | (25) | — | 93 | 148 |
| | 30 | — | 92 | 146 |
| Bracket | Flange | 5 | 6 | 16 |
| | Foot | 8 | 10 | 24 |
| | Clevis | 3 | 7 | 12 |
| | Trunnion (With pin) | 18 | 32 | 80 |

Auto Switch/Weight (g)

| Name | Model | Lead wire length | | |
|---------------------------------|-----------|------------------|----|----|
| | | 0.5m | 3m | 5m |
| Switch | D-90,97 | 5 | 23 | 37 |
| | D-90A,93A | 9 | 47 | 77 |
| Mounting bracket with set screw | BP-1 | 1 | | |

* 5mm stroke is with one switch.

Formula) DCJPF10-15D-90
Basic ø10
Stroke 15mm
Mounting Flange
Auto switch ... D-90 2pcs.
Mounting bracket + Set screw ... BP-1 2pcs.
73 + 6 + 5 X 2 + 1 X 2=91g

Series CDJP With Auto Switch

Refer to p.5.3-2 for auto switch details.



Reed Switch Specifications/Direct Mounting

| Auto switch model | D-90 | D-97 | D-90A | D-93A |
|-----------------------|--------------------------------|---------------------|-------------------------------------|-----------------------------------------|
| Applicable load | IC circuit, Relay, PLC | Relay, PLC | IC circuit, Relay, PLC | Relay, PLC |
| Load voltage | 5, 12, 24V ^{AC} DC | 24V DC | 5, 12, 24, 100V ^{AC} DC | 24V DC 100V AC |
| Max. load current | 50mA | 5 to 40mA | 50mA | 24V DC: 5 to 40mA 100V AC: 5 to 20mA |
| Internal voltage drop | 0 | 2.4 V or less | 0 | 2.4 V or less |
| Indicator light | None | ON: Red light diode | None | ON: Red light diode |

CJ1

CJP

CJ2

CM2

C85

CG1

MB

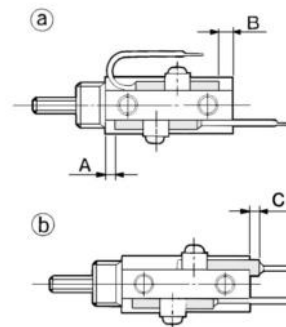
C95

CA1

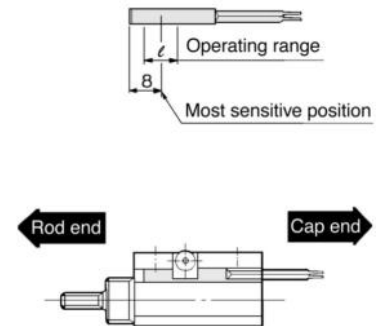
CS1

Proper Auto Switch Mounting Position (End of stroke)

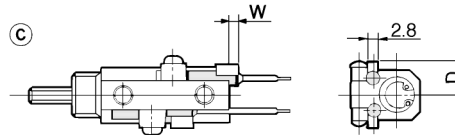
D-90/D-60A



Most sensitive position and operating range of auto switch



D-97/D-93A



| Bore size (mm) | Dimension A | | Dimension B | | Dimension C | | Dimension W | | D | Operating range (mm) | |
|----------------|----------------|--------|-------------|--------------|-------------|----------------|-------------|----------------|---|----------------------|--------|
| | 5,10,15,20(st) | 30(st) | 5(st) | 10,15,20(st) | 30(st) | 5,10,15,20(st) | 30(st) | 5,10,15,20(st) | | | 30(st) |
| 6 | 3.5 | — | — | 5 | — | 1.5 | — | 7.5 | — | 9.5 | 5.5 |
| 10 | 2.5 | — | — | 4 | — | 3 | — | 9 | — | 10 | 8 |
| 15 | 2 | — | — | 3.5 | — | 3.5 | — | 9.5 | — | 11 | 9 |

- 1) The above dimensions may vary in areas where magnetic interference is present.
- 2) For 5 stroke cylinders, only one auto switch may be mounted either on the rod end or the cap end.
- 3) There are two ways to mount the auto switches as shown in the above figure. For the b, c, method, the cap end auto switch will extend slightly past the cap end.

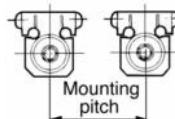
⚠ Precautions

Refer to p.0-44 to 0-46 for Common Precautions before handling auto switch.

⚠ Caution

- ① If auto switch cylinders are used in parallel keep the distance between cylinders in accordance with the chart below.

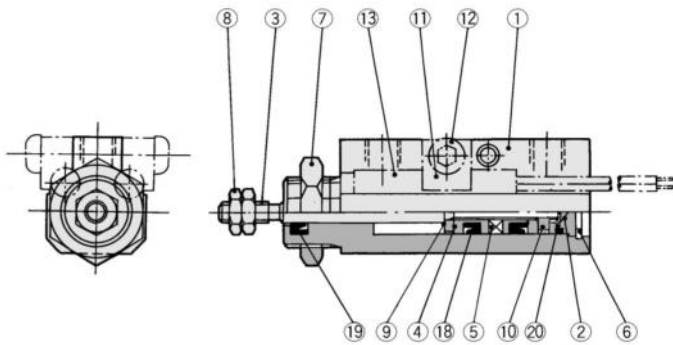
| Bore size | 6 | 10 | 15 |
|---------------------|----|----|----|
| Mounting pitch (mm) | 20 | 30 | 35 |



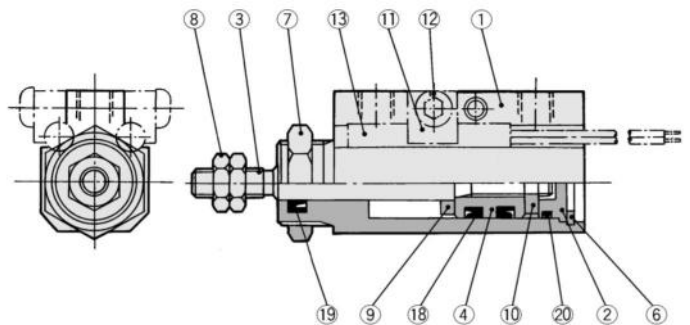
Series CJP

Construction

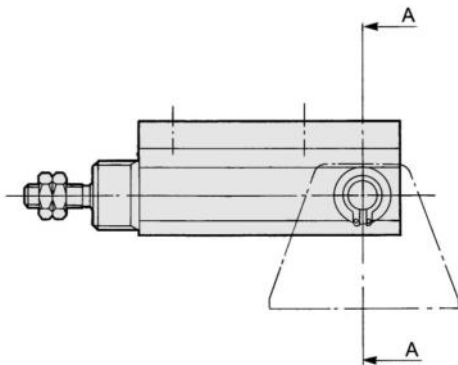
C□JPB6



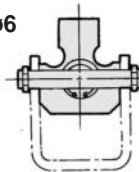
C□JPB10 C□JPB15



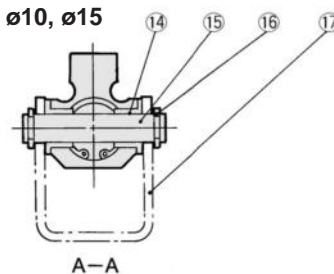
CJP \varnothing 6 to 15 (Construction is same as CJPB 6 to 15.)



In case of $\varnothing 6$



In case of $\varnothing 10, \varnothing 15$



Component Parts

| No. | Description | Material | Remarks | |
|-----|-------------------------|----------------------------------|-----------------------------------------|---------------------------------|
| ① | Body | Brass | Electroless nickel plated | |
| ② | Cap cover | Brass | Electroless nickel plated | |
| ③ | Piston rod | Stainless steel | | |
| ④ | Piston | $\varnothing 6$ | Brass | |
| | | $\varnothing 10, \varnothing 15$ | Brass | With switch: Magnetic substance |
| ⑤ | Magnet | Magnet | With auto switch only | |
| ⑥ | Retaining ring | Steel | Black zinc chromate | |
| ⑦ | Mounting nut | Brass | Electroless nickel plated | |
| ⑧ | Rod end nut | Steel | Nickel plated | |
| ⑨ | Bumper A | Urethane | | |
| ⑩ | Bumper B | Urethane | | |
| ⑪ | Switch mounting bracket | Aluminium alloy | Black anodized | |
| ⑫ | Switch screw | Steel wire | Black zinc chromate | |
| ⑬ | Auto switch | — | D-90, D-97, D-90A, D-93A | |
| ⑭ | Flange bushing | Resin | The 6mm bore cylinder is not available. | |
| ⑮ | Trunnion pin | Stainless steel | Only trunnion mount | |
| ⑯ | Clip | Carbon steel | | Black zinc chromated |
| ⑰ | Trunnion | Carbon steel | | Black zinc chromated |
| ⑱ | Piston seal | NBR | | |
| ⑲ | Rod seal | NBR | | |
| ⑳ | Cap gasket | NBR | | |

Replacement Parts/Seal kits

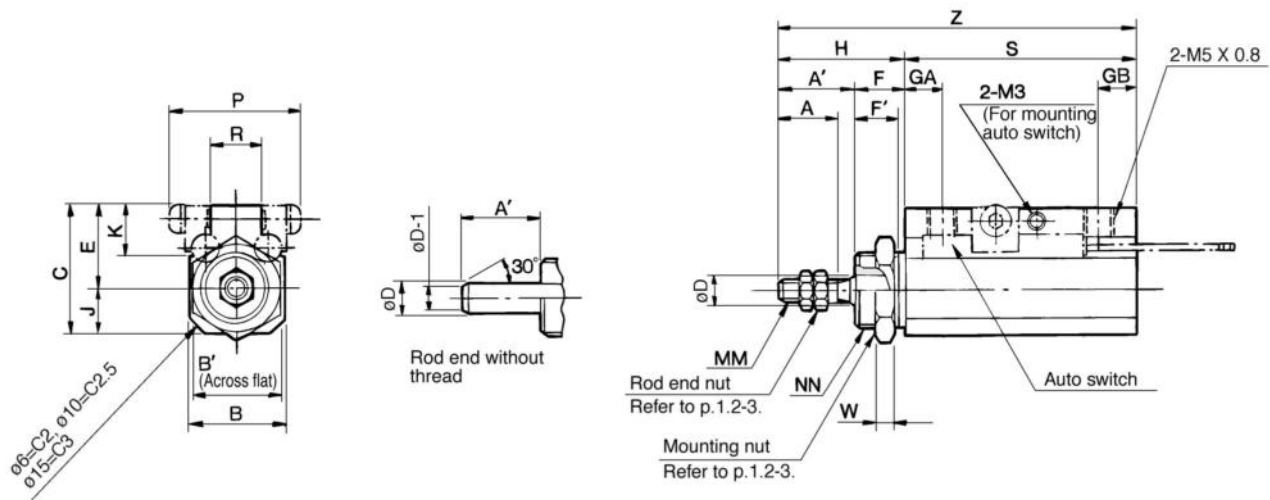
| Bore size (mm) | Kit No. | Remarks |
|----------------|------------|-----------------------------|
| 6 | CJPB6D-PS | Set of the above No.⑱, ⑲, ⑳ |
| 10 | CJPB10D-PS | |
| 15 | CJPB15D-PS | |

* No.⑱, ⑲ and ⑳ are one seal kit. Please order a seal kit with each Part No. of tube bore size.

Pin Cylinder/Double Acting Single Rod *Series CJP*



C□JPB



| Bore (mm) | A | A' | B | B' | D | F | F' | GA | GB | H | J | K | MM | NN | R | S | | | | |
|-----------|----|----|----|----|---|----|-----|----|----|----|---|---|----------|-----------|----|-----------------|------------------|------------------|------------------|------------------|
| | | | | | | | | | | | | | | | | 5 st | 10 st | 15 st | 20 st | 30 st |
| 6 | 7 | 9 | 14 | 14 | 3 | 8 | 6.5 | 6 | 6 | 17 | 6 | 8 | M3 X 0.5 | M10 X 1.0 | 7 | 30.5 | 35.5 | 40.5 | 45.5 | — |
| 10 | 10 | 12 | 15 | 17 | 5 | 8 | 6.5 | 6 | 7 | 20 | 7 | 8 | M4 X 0.7 | M12 X 1.0 | 8 | 30.5 | 35.5 | 40.5 | 45.5 | 55.5 |
| 15 | 12 | 14 | 20 | 19 | 6 | 10 | 8.5 | 6 | 7 | 24 | 9 | 8 | M5 X 0.8 | M14 X 1.0 | 10 | 30.5 | 35.5 | 40.5 | 45.5 | 55.5 |

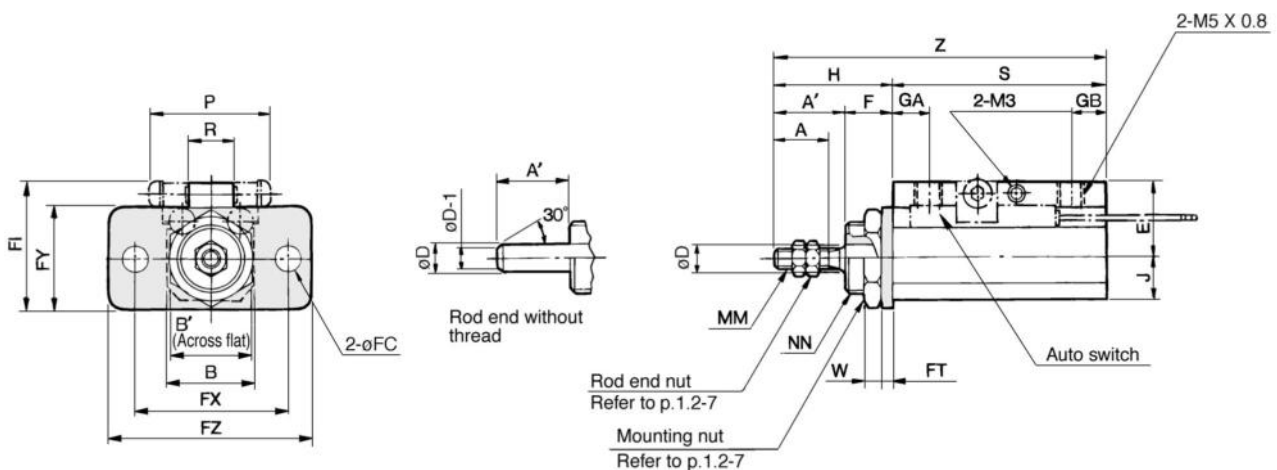
| Bore (mm) | W | Z | | | | | With auto switch | | |
|-----------|---|-----------------|------------------|------------------|------------------|------------------|------------------|------|----|
| | | 5 st | 10 st | 15 st | 20 st | 30 st | C | E | P |
| 6 | 3 | 47.5 | 52.5 | 57.5 | 62.5 | — | 16.5 | 10.5 | 20 |
| 10 | 3 | 50.5 | 55.5 | 60.5 | 65.5 | 75.5 | 20 | 13 | 21 |
| 15 | 4 | 54.5 | 59.5 | 64.5 | 69.5 | 79.5 | 24.5 | 15.5 | 23 |

CJPB6.....SCJP6, #1
 CJPB10.....SCJP10, #1
 CJPB15.....SCJP15, #1

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

Flange

C□JPF



| Bore (mm) | A | A' | B | B' | D | E | F | GA | GB | H | J | MM | NN | R | FC | FT | FX | FY | FZ |
|-----------|----|----|----|----|---|------|----|----|----|----|---|----------|-----------|----|-----|-----|----|----|----|
| 6 | 7 | 9 | 14 | 14 | 3 | 10.5 | 8 | 6 | 6 | 17 | 6 | M3 X 0.5 | M10 X 1.0 | 7 | 3.4 | 1.6 | 24 | 16 | 32 |
| 10 | 10 | 12 | 15 | 17 | 5 | 13 | 8 | 6 | 7 | 20 | 7 | M4 X 0.7 | M12 X 1.0 | 8 | 4.5 | 1.6 | 28 | 18 | 37 |
| 15 | 12 | 14 | 20 | 19 | 6 | 15.5 | 10 | 6 | 7 | 24 | 9 | M5 X 0.8 | M14 X 1.0 | 10 | 5.5 | 2.3 | 36 | 22 | 49 |

| Bore (mm) | S | | | | | W | Z | | | | | With auto switch | |
|-----------|-----------------|------------------|------------------|------------------|------------------|---|-----------------|------------------|------------------|------------------|------------------|------------------|------|
| | 5 st | 10 st | 15 st | 20 st | 30 st | | 5 st | 10 st | 15 st | 20 st | 30 st | P | FI |
| 6 | 30.5 | 35.5 | 40.5 | 45.5 | — | 3 | 47.5 | 52.5 | 57.5 | 62.5 | — | 20 | 18.5 |
| 10 | 30.5 | 35.5 | 40.5 | 45.5 | 55.5 | 3 | 50.5 | 55.5 | 60.5 | 65.5 | 75.5 | 21 | 22 |
| 15 | 30.5 | 35.5 | 40.5 | 45.5 | 55.5 | 4 | 54.5 | 59.5 | 64.5 | 69.5 | 79.5 | 23 | 26.5 |

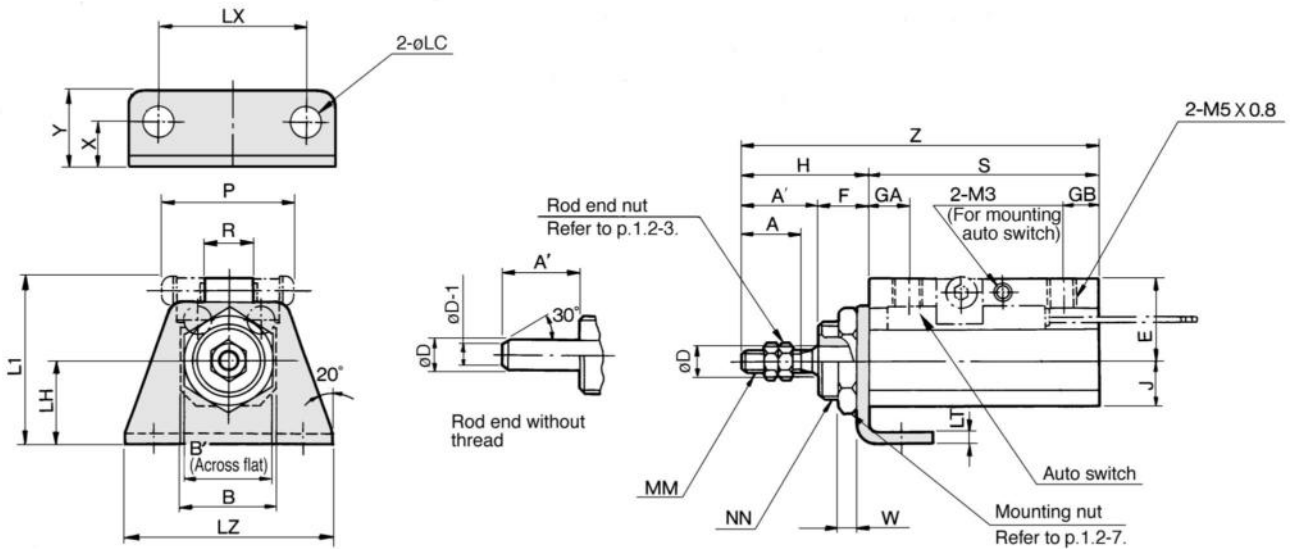
CJPF6.....SCJP6, #2
 CJPF10.....SCJP10, #2
 CJPF15.....SCJP15, #2

Series CJP

Foot



C□JPL



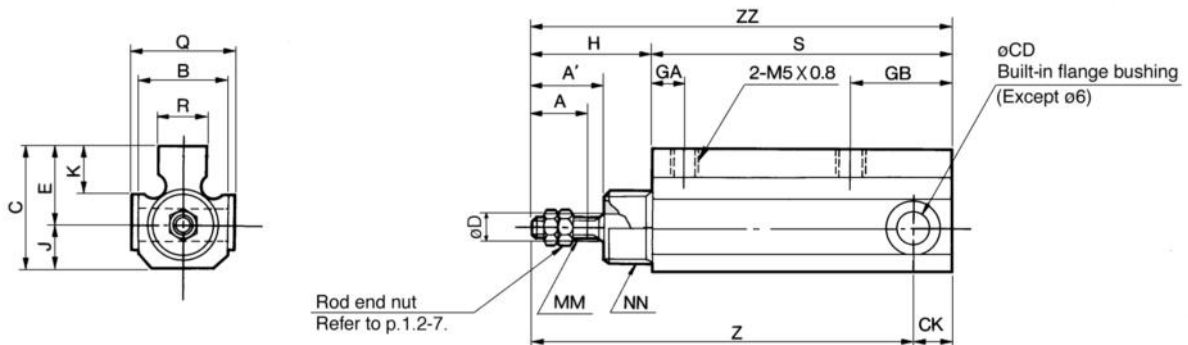
| Bore (mm) | A | A' | B | B' | D | E | F | GA | GB | H | MM | NN | R | X | Y | LC | LH | LT | LX | LZ |
|-----------|----|----|----|----|---|------|----|----|----|----|----------|-----------|----|-----|------|-----|----|-----|----|----|
| 6 | 7 | 9 | 14 | 14 | 3 | 10.5 | 8 | 6 | 6 | 17 | M3 X 0.5 | M10 X 1.0 | 7 | 6.5 | 10.5 | 3.4 | 11 | 1.6 | 20 | 28 |
| 10 | 10 | 12 | 15 | 17 | 5 | 13 | 8 | 6 | 7 | 20 | M4 X 0.7 | M12 X 1.0 | 8 | 7 | 12 | 4.5 | 13 | 1.6 | 24 | 33 |
| 15 | 12 | 14 | 20 | 19 | 6 | 15.5 | 10 | 6 | 7 | 24 | M5 X 0.8 | M14 X 1.0 | 10 | 10 | 16.5 | 5.5 | 18 | 2.3 | 30 | 43 |

| Bore (mm) | S | | | | | W | Z | | | | | J | With auto switch | |
|-----------|-----------------|------------------|------------------|------------------|------------------|---|-----------------|------------------|------------------|------------------|------------------|---|------------------|------|
| | 5 st | 10 st | 15 st | 20 st | 30 st | | 5 st | 10 st | 15 st | 20 st | 30 st | | P | L1 |
| 6 | 30.5 | 35.5 | 40.5 | 45.5 | — | 3 | 47.5 | 52.5 | 57.5 | 62.5 | — | 6 | 20 | 21.5 |
| 10 | 30.5 | 35.5 | 40.5 | 45.5 | 55.5 | 3 | 50.5 | 55.5 | 60.5 | 65.5 | 75.5 | 7 | 21 | 26 |
| 15 | 30.5 | 35.5 | 40.5 | 45.5 | 55.5 | 4 | 54.5 | 59.5 | 64.5 | 69.5 | 79.5 | 9 | 23 | 33.5 |

CJP6.....SCJP6, #3
CJPL10.....SCJP10, #3
CJPL15.....SCJP15, #3

Clevis

CJPD/Without auto switch



| Bore (mm) | A | A' | B | C | D | E | GA | GB | H | J | K | MM | NN | Q | R | CD | CK |
|-----------|----|----|----|------|---|------|----|------|----|---|---|----------|-----------|---------------------------------|----|----------------------------------|-----|
| 6 | 7 | 9 | 14 | 16.5 | 3 | 10.5 | 6 | 11 | 17 | 6 | 8 | M3 X 0.5 | M10 X 1.0 | — | 7 | 3 ^{+0.040} ₀ | 4 |
| 10 | 10 | 12 | 15 | 20 | 5 | 13 | 6 | 17 | 20 | 7 | 8 | M4 X 0.7 | M12 X 1.0 | 17 ⁰ _{-0.5} | 8 | 5 ^{+0.065} ₀ | 6.5 |
| 15 | 12 | 14 | 20 | 24.5 | 6 | 15.5 | 6 | 18.5 | 24 | 9 | 8 | M5 X 0.8 | M14 X 1.0 | 22 ⁰ _{-0.5} | 10 | 6 ^{+0.065} ₀ | 8 |

| Bore (mm) | S | | | | | Z | | | | | ZZ | | | | |
|-----------|-----------------|------------------|------------------|------------------|------------------|-----------------|------------------|------------------|------------------|------------------|-----------------|------------------|------------------|------------------|------------------|
| | 5 st | 10 st | 15 st | 20 st | 30 st | 5 st | 10 st | 15 st | 20 st | 30 st | 5 st | 10 st | 15 st | 20 st | 30 st |
| 6 | 35.5 | 40.5 | 45.5 | 50.5 | — | 48.5 | 53.5 | 58.5 | 63.5 | — | 52.5 | 57.5 | 62.5 | 67.5 | — |
| 10 | 40.5 | 45.5 | 50.5 | 55.5 | 65.5 | 54 | 59 | 64 | 69 | 79 | 60.5 | 65.5 | 70.5 | 75.5 | 85.5 |
| 15 | 42 | 47 | 52 | 57 | 67 | 58 | 63 | 68 | 73 | 83 | 66 | 71 | 76 | 81 | 91 |

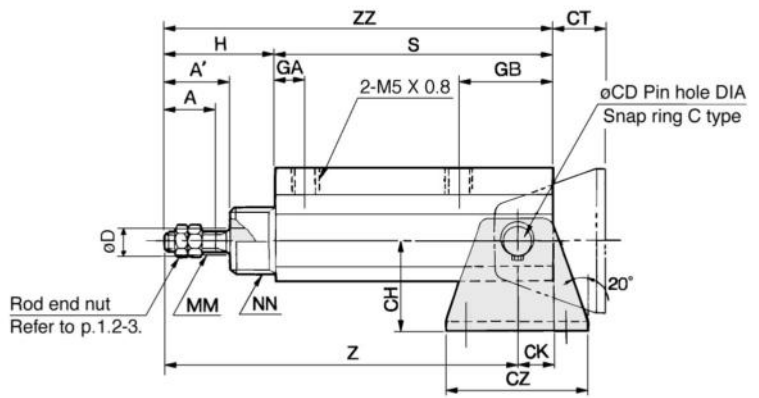
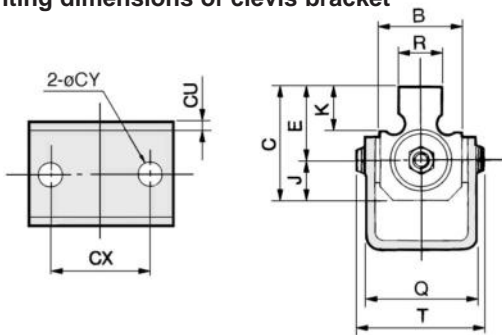
CJPD6.....SCJP6, #4
CJPD10.....SCJP10, #4
CJPD15.....SCJP15, #4

Pin Cylinder/Double Acting Single Rod *Series CJP*



CJPT/Without Auto Switch

Mounting dimensions of clevis bracket



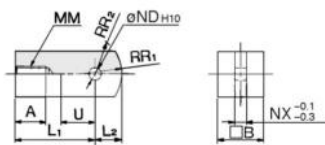
| Bore (mm) | A | A' | B | C | D | E | GA | GB | H | J | K | MM | NN | Q | T | CD | CH | CK | CT | CU | CX | CY | CZ |
|-----------|----|----|----|------|---|------|----|------|----|---|---|----------|-----------|------|------|----|----|-----|------|-----|----|-----|----|
| 6 | 7 | 9 | 14 | 16.5 | 3 | 10.5 | 6 | 11 | 17 | 6 | 8 | M3 X 0.5 | M10 X 1.0 | 18.5 | 20.4 | 3 | 16 | 4 | 12 | 1.6 | 18 | 3.4 | 26 |
| 10 | 10 | 12 | 15 | 20 | 5 | 13 | 6 | 17 | 20 | 7 | 8 | M4 X 0.7 | M12 X 1.0 | 20.5 | 23.9 | 5 | 20 | 6.5 | 13.5 | 1.6 | 24 | 4.5 | 33 |
| 15 | 12 | 14 | 20 | 24.5 | 6 | 15.5 | 6 | 18.5 | 24 | 9 | 8 | M5 X 0.8 | M14 X 1.0 | 28 | 31.7 | 6 | 25 | 8 | 17 | 2.9 | 29 | 5.5 | 42 |

| Bore (mm) | S | | | | | Z | | | | | ZZ | | | | | R |
|-----------|-----------------|------------------|------------------|------------------|------------------|-----------------|------------------|------------------|------------------|------------------|-----------------|------------------|------------------|------------------|------------------|----|
| | 5 st | 10 st | 15 st | 20 st | 30 st | 5 st | 10 st | 15 st | 20 st | 30 st | 5 st | 10 st | 15 st | 20 st | 30 st | |
| 6 | 35.5 | 40.5 | 45.5 | 50.5 | — | 48.5 | 53.5 | 58.5 | 63.5 | — | 52.5 | 57.5 | 62.5 | 67.5 | — | 7 |
| 10 | 40.5 | 45.5 | 50.5 | 55.5 | 65.5 | 54 | 59 | 64 | 69 | 79 | 60.5 | 65.5 | 70.5 | 75.5 | 85.5 | 8 |
| 15 | 42 | 47 | 52 | 57 | 67 | 58 | 63 | 68 | 73 | 83 | 66 | 71 | 76 | 81 | 91 | 10 |

CJPT6.....SCJP6, #5
 CJPT10.....SCJP10, #5
 CJPT15.....SCJP15, #5

Accessories

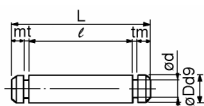
Single Knuckle Joint



Material: Rolled steel

| Model | Bore (mm) | A | B | L1 | L2 | MM | NDH10 | NX | R1 | R2 | U |
|--------|-----------|-----|----|----|-----|----------|---------------------------------------|----|----|-----|---|
| I-P006 | 6 | 5 | 6 | 12 | 3.5 | M3 X 0.5 | 3 ^{+0.040} _{-0.020} | 3 | 5 | 4 | 5 |
| I-P010 | 10 | 6.5 | 10 | 16 | 5.5 | M4 X 0.7 | 5 ^{+0.048} _{-0.030} | 5 | 8 | 6.3 | 7 |
| I-P015 | 15 | 7 | 12 | 19 | 7 | M5 X 0.8 | 6 ^{+0.048} _{-0.030} | 6 | 10 | 7.8 | 9 |

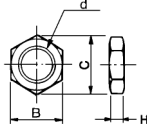
Knuckle Pin



Material: Stainless steel

| Model | Bore (mm) | D d9 | L | d | ℓ | m | t | Snap ring |
|---------|-----------|---------------------------------------|------|------|------|------|------|---------------|
| IY-P006 | 6 | 3 ^{-0.020} _{-0.045} | 9 | 2.85 | 6.2 | 0.75 | 0.65 | Clip C type 3 |
| IY-P010 | 10 | 5 ^{-0.030} _{-0.060} | 13.6 | 4.8 | 10.2 | 1 | 0.7 | C type 5 |
| IY-P015 | 15 | 6 ^{-0.030} _{-0.060} | 15.8 | 5.7 | 12.2 | 1 | 0.8 | C type 6 |

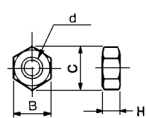
Mounting Nut



Material: Brass

| Model | Bore (mm) | d | H | B | C |
|---------|-----------|-----------|---|----|------|
| SNP-006 | 6 | M10 X 1.0 | 3 | 14 | 16.2 |
| SNP-010 | 10 | M12 X 1.0 | 3 | 17 | 19.6 |
| SNP-015 | 15 | M14 X 1.0 | 4 | 19 | 21.9 |

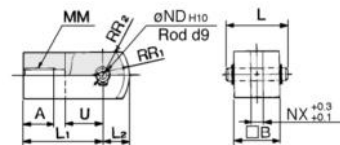
Rod End Nut



Material: Steel

| Model | Bore (mm) | d | H | B | C |
|---------|-----------|----------|-----|-----|-----|
| NTP-006 | 6 | M3 X 0.5 | 1.8 | 5.5 | 6.4 |
| NTP-010 | 10 | M4 X 0.7 | 2.4 | 7 | 8.1 |
| NTP-015 | 15 | M5 X 0.8 | 3.2 | 8 | 9.2 |

Double Knuckle Joint

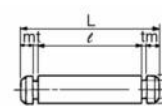


* Knuckle pin and snap ring are sent together.

Material: Rolled steel

| Model | Bore (mm) | A | B | L | L1 | L2 | MM | NDd9 | NDH10 | NX | R1 | R2 | U |
|--------|-----------|-----|----|------|----|-----|----------|---------------------------------------|----------------------------------|----|----|-----|---|
| Y-P006 | 6 | 5 | 6 | 9 | 12 | 3.5 | M3 X 0.5 | 3 ^{-0.020} _{-0.045} | 3 ^{+0.040} ₀ | 3 | 5 | 4 | 5 |
| Y-P010 | 10 | 6.5 | 10 | 13.6 | 16 | 5.5 | M4 X 0.7 | 5 ^{-0.030} _{-0.060} | 5 ^{+0.048} ₀ | 5 | 8 | 6.3 | 7 |
| Y-P015 | 15 | 7 | 12 | 15.8 | 19 | 7 | M5 X 0.8 | 6 ^{-0.030} _{-0.060} | 6 ^{+0.048} ₀ | 6 | 10 | 7.8 | 9 |

Trunnion Pin



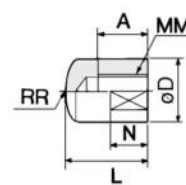
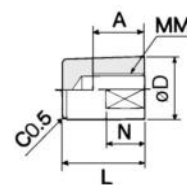
Material: Stainless steel

| Model | Bore (mm) | D d9 | L | d | ℓ | m | t | Snap ring |
|---------|-----------|---------------------------------------|------|------|------|------|------|---------------|
| CT-P006 | 6 | 3 ^{-0.020} _{-0.045} | 20.4 | 2.85 | 17.6 | 0.75 | 0.65 | Clip C type 3 |
| CT-P010 | 10 | 5 ^{-0.030} _{-0.060} | 23.9 | 4.8 | 20.5 | 1 | 0.7 | C type 5 |
| CT-P015 | 15 | 6 ^{-0.030} _{-0.060} | 31.7 | 5.7 | 28.1 | 1 | 0.8 | C type 6 |

Rod End Cap

Flat style/CJ-CF□□□

Rounded style/CJ-CR□□□



Material: POM.

| Model | Bore (mm) | | A | D | L | MM | N | R | W |
|----------|------------|---------------|----|----|----|----------|---|----|----|
| | Flat style | Rounded style | | | | | | | |
| CJ-CF006 | CJ-CR006 | 6 | 6 | 8 | 11 | M3 X 0.5 | 5 | 8 | 6 |
| CJ-CF010 | CJ-CR010 | 10 | 8 | 10 | 13 | M4 X 0.7 | 6 | 10 | 8 |
| CJ-CF016 | CJ-CR016 | 15 | 10 | 12 | 15 | M5 X 0.8 | 7 | 12 | 10 |

Pin Cylinder/Single Acting Spring Return

Series CJP

ø6, ø10, ø15

A short stroke miniature cylinder with a shorter overall length.

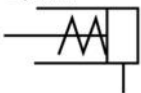
The installation space can be significantly reduced because this cylinder can be recessed directly into a machine body or installed on a panel. Thus, the machines can be made more compact.



Plug Mounting Style

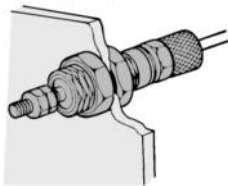
Panel Mounting Style

Symbol

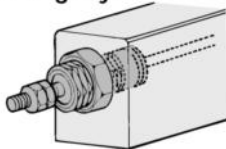


Mounting Style

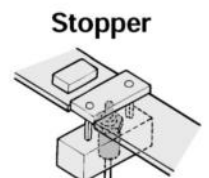
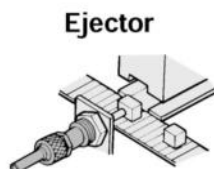
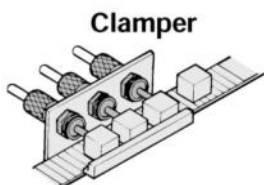
Panel Mounting Style



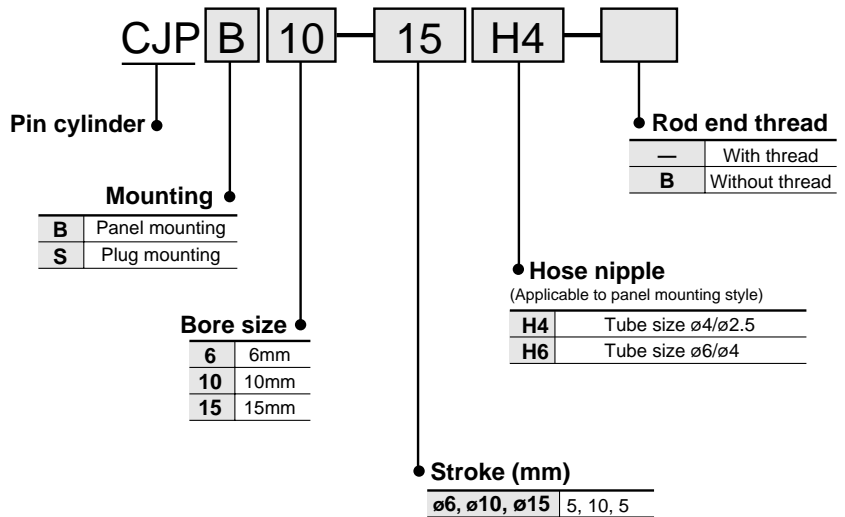
Plug Mounting Style



Application Examples



How to Order



Specifications

| | | |
|-------------------------------|-----------------------------|------------------|
| Action | Single acting spring return | |
| Max. operating pressure | 0.7MPa | |
| Min. operating pressure | ø6 | 0.2MPa |
| | ø10, ø15 | 0.15MPa |
| Proof pressure | 1.05MPa | |
| Ambient and fluid temperature | -10 to 70°C (Non-freezing) | |
| Lubrication | Not required | |
| Operating piston speed | 50 to 500mm/s | |
| Cushion | None | |
| Stroke tolerance | +1.0 0 | |
| Thread tolerance | JIS 2 class | |
| Rod end thread | With thread/Without thread | |
| Mounting method | Panel mounting | Plug mounting |
| | Mounting nut (2) | Mounting nut (1) |
| Standard accessories | Hose nipple (1) | Gasket (1) |
| | Rod end nut (2)* | Rod end nut (2)* |

* Provided to the model with rod end nut.

Pin Cylinder/Single Acting Spring Return *Series CJP*

Standard Strokes

| Bore size (mm) | Stroke (mm) |
|----------------|-------------|
| 6 | 5, 10, 15 |
| 10 | 5, 10, 15 |
| 15 | 5, 10, 15 |

Spring Retracting Force (N)

| Bore size (mm) | Stroke (mm) | 0 stroke | Stroke end |
|----------------|-------------|----------|------------|
| 6 | 5, 10, 15 | 3.92 | 1.42 |
| 10 | 5, 10, 15 | 5.98 | 2.45 |
| 15 | 5, 10, 15 | 10.8 | 4.41 |

* Same spring force for each stroke.

Weight (g)

| Model | Stroke (mm) | | |
|--------|-------------|------|------|
| | 5 | 10 | 15 |
| CJP□6 | 10.6 | 13.1 | 15.6 |
| CJP□10 | 28 | 33 | 38 |
| CJP□15 | 72 | 82 | 92 |

* Weight of hose nipple (4gf) is not included.

Hose Nipple For Panel Mount Style (With Fixed Orifice)

| Applicable tubing | Model |
|-------------------|---------|
| ø4/ø2.5 | CJ-5H-4 |
| ø6/ø4 | CJ-5H-6 |

Theoretical Force (N)

| Bore size (mm) | Operating direction | Operating pressure (MPa) | | |
|----------------|---------------------|--------------------------|------|------|
| | | 0.3 | 0.5 | 0.7 |
| 6 | OUT | 4.56 | 10.2 | 15.9 |
| | IN | 1.42 | | |
| 10 | OUT | 17.6 | 33.3 | 49.0 |
| | IN | 2.45 | | |
| 15 | OUT | 42.2 | 77.5 | 113 |
| | IN | 4.41 | | |

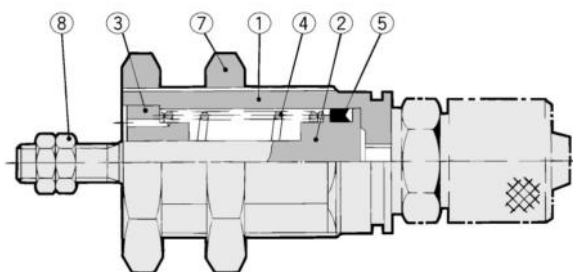


Precautions

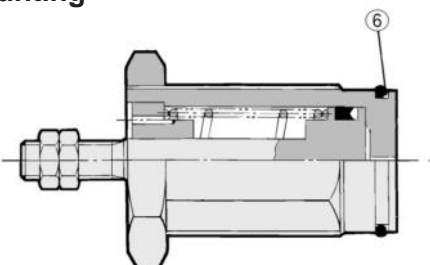
Be sure to read before handling.
Refer to p.0-39 to 0-46 for Safety
Instructions and common precautions.

Construction (Disassembly is not possible.)

Panel mounting



Plug mounting



Component Parts (Disassembly is not possible.)

| No. | Description | Material | Note |
|-----|---------------|-----------------|---------------------------------------------|
| ① | Cover | Brass | Electroless nickel plated |
| ② | Piston | Stainless steel | |
| ③ | Collar | Brass | |
| ④ | Return spring | Piano wire | Zinc chromate |
| ⑤ | Piston seal | NBR | |
| ⑥ | Gasket | NBR | Special product (O ring) Plug mounting only |
| ⑦ | Mounting nut | Brass | Electroless nickel plated |
| ⑧ | Rod end nut | Steel | Nickel plated |

Provided Nut/Part No.

| Description | Bore (mm) | 6 | 10 | 15 |
|-------------|--------------|---------|----------|----------|
| | Mounting nut | | SNPS-006 | SNPS-010 |
| Rod end nut | | NTP-006 | NTP-010 | NTP-015 |

Piping

Caution

- Use a dedicated hose nipple. On the panel mounting style, use the CJ-5H-4 or CJ-5H-6, a dedicated hose nipple (with a fixed restriction) that is provided. If a different fitting must be used due to unavoidable circumstances, make sure to install a speed controller and use it by adjusting it to 500mm/s or less.

Mounting

Caution

- Do not operate in such a way that a load is applied to the piston rod during its 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.

CJ1

CJP

CJ2

CM2

C85

CG1

MB

C95

CA1

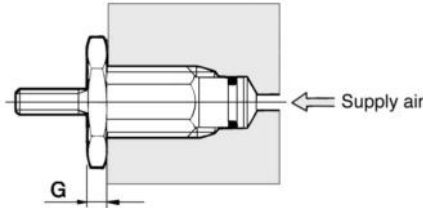
CS1

Series CJP

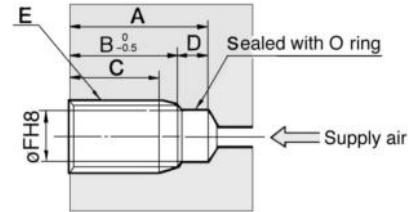


Recommended Mounting Hole Dimensions for Plug Mounting Style

When plug mounted



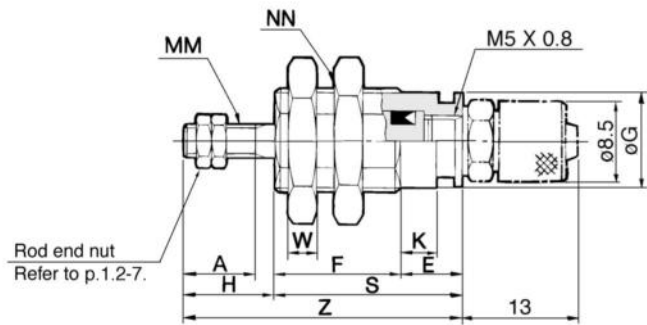
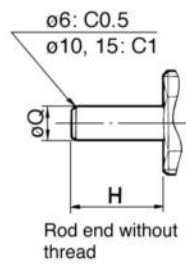
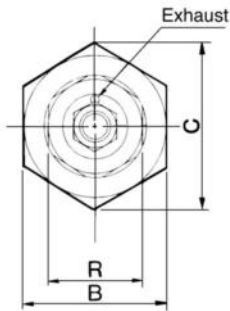
Machining dimensions for Mounting



| Bore (mm) | Stroke | A | B | C | D | E | F | G |
|-----------|--------|------|------|------|-----|-----------|-----|---|
| 6 | 5 | 16 | 12.5 | 10 | 3.5 | M10 X 1.0 | 8.5 | 3 |
| | 10 | 23 | 19.5 | 17 | | | | |
| | 15 | 30 | 26.5 | 24 | | | | |
| 10 | 5 | 17 | 13.5 | 10.5 | 3.5 | M15 X 1.5 | 12 | 4 |
| | 10 | 23.5 | 20 | 17 | | | | |
| | 15 | 30.5 | 27 | 24 | | | | |
| 15 | 5 | 19 | 14.5 | 11.5 | 4.5 | M22 X 1.5 | 19 | 5 |
| | 10 | 25 | 20.5 | 17.5 | | | | |
| | 15 | 31.5 | 27 | 24 | | | | |

Panel Mounting Style

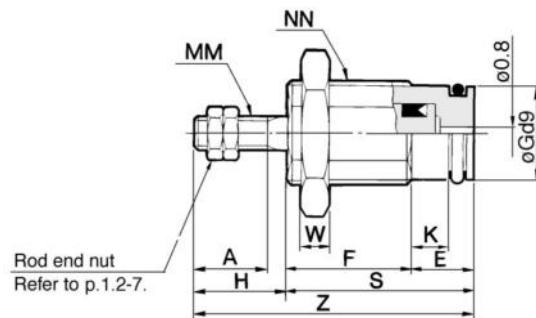
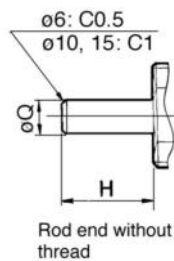
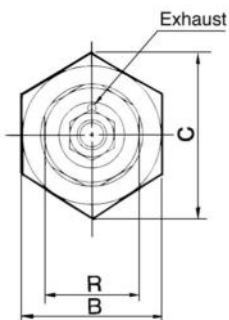
CJPB



| Bore (mm) | A | B | C | E | F | | | G | H | K | MM | NN | R | S | | | W | Z | | | Q |
|-----------|----|----|------|---|-----------------|------------------|------------------|-----|----|-----|----------|-----------|----|-----------------|------------------|------------------|---|-----------------|------------------|------------------|---|
| | | | | | 5 st | 10 st | 15 st | | | | | | | 5 st | 10 st | 15 st | | 5 st | 10 st | 15 st | |
| 6 | 7 | 12 | 13.9 | 6 | 12.5 | 19.5 | 26.5 | 8.5 | 9 | 3.5 | M3 X 0.5 | M10 X 1.0 | 9 | 18.5 | 25.5 | 32.5 | 3 | 27.5 | 34.5 | 41.5 | 3 |
| 10 | 10 | 19 | 22 | 6 | 14.5 | 21 | 28 | 12 | 12 | 3.5 | M4 X 0.7 | M15 X 1.5 | 13 | 20.5 | 27 | 34 | 4 | 32.5 | 39 | 46 | 5 |
| 15 | 12 | 27 | 31 | 7 | 16.5 | 22.5 | 29 | 19 | 14 | 4.2 | M5 X 0.8 | M22 X 1.5 | 20 | 23.5 | 29.5 | 36 | 5 | 37.5 | 43.5 | 50 | 6 |

Plug Mounting Style

CJPS



| Bore (mm) | A | B | C | E | F | | | G | H | K | MM | NN | R | S | | | W | Z | | | Q |
|-----------|----|----|------|---|-----------------|------------------|------------------|-----|----|-----|----------|-----------|----|-----------------|------------------|------------------|---|-----------------|------------------|------------------|---|
| | | | | | 5 st | 10 st | 15 st | | | | | | | 5 st | 10 st | 15 st | | 5 st | 10 st | 15 st | |
| 6 | 7 | 12 | 13.9 | 6 | 12.5 | 19.5 | 26.5 | 8.5 | 9 | 3.5 | M3 X 0.5 | M10 X 1.0 | 9 | 18.5 | 25.5 | 32.5 | 3 | 27.5 | 34.5 | 41.5 | 3 |
| 10 | 10 | 19 | 22 | 6 | 14.5 | 21 | 28 | 12 | 12 | 3.5 | M4 X 0.7 | M15 X 1.5 | 13 | 20.5 | 27 | 34 | 4 | 32.5 | 39 | 46 | 5 |
| 15 | 12 | 27 | 31 | 7 | 16.5 | 22.5 | 29 | 19 | 14 | 4.2 | M5 X 0.8 | M22 X 1.5 | 20 | 23.5 | 29.5 | 36 | 5 | 37.5 | 43.5 | 50 | 6 |

CJPB6.....SCJP6, #6
 CJPB10.....SCJP10, #6
 CJPB15.....SCJP15, #6