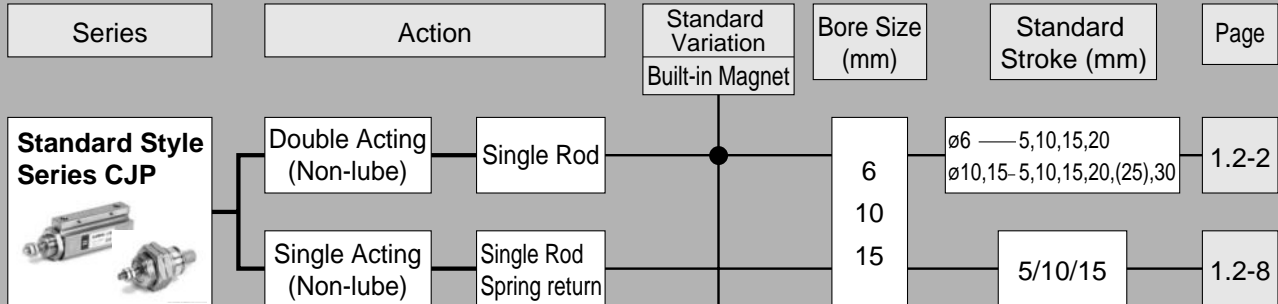


Pin Cylinder Series CJP

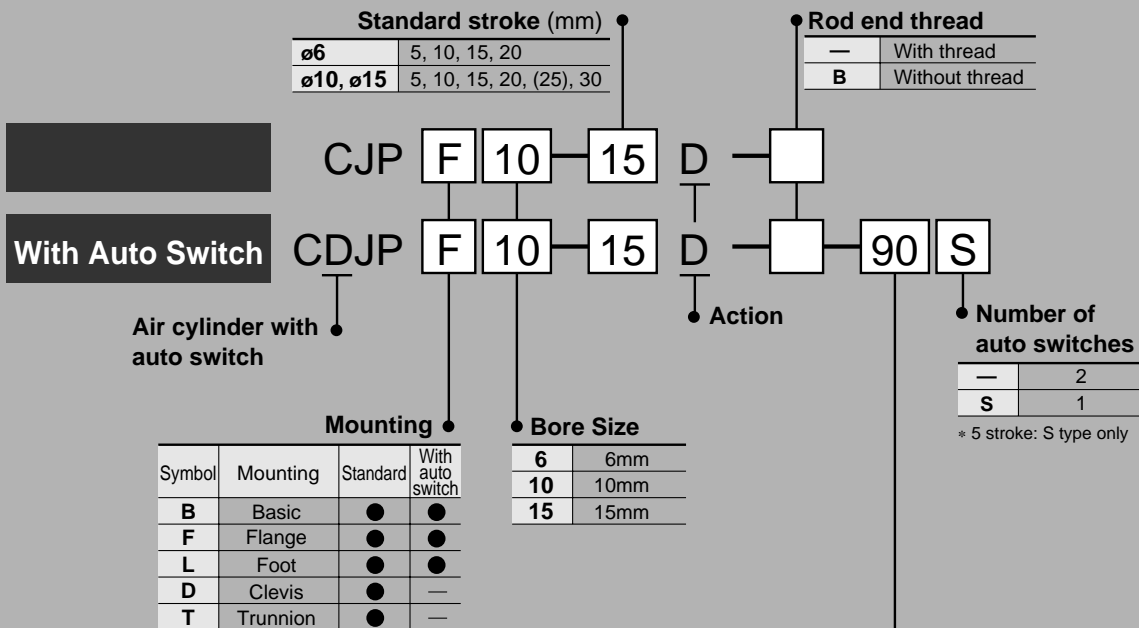
Double Acting/Single Acting Spring Return

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	Relay PLC
				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

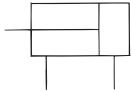
Series CJP



ø6, ø10, ø15

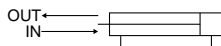


Symbol
Double acting/Single rod



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.

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 nut (1)	Rod end nut (2)	Trunnion (with pin)	
				Basic
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

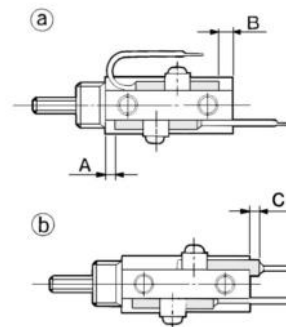
C95

CA1

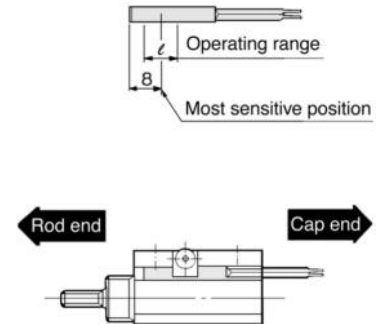
CS1

Proper Auto Switch Mounting Position (End of stroke)

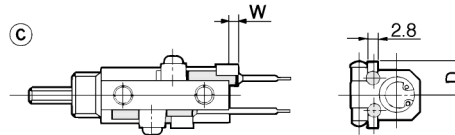
D-90/D-60A



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.

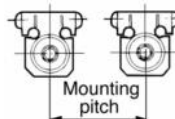
⚠ Precautions

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.

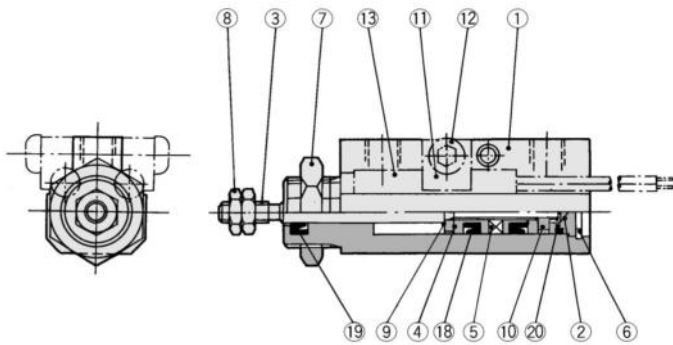
Bore size	6	10	15
Mounting pitch (mm)	20	30	35



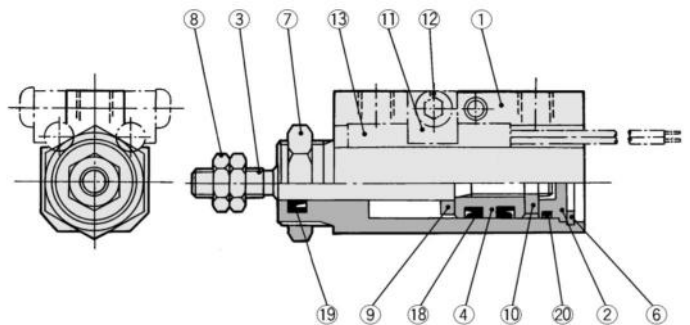
Series CJP

Construction

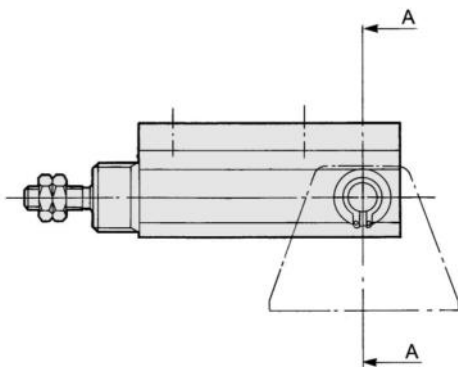
C□JPB6



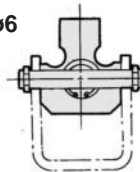
C□JPB10 C□JPB15



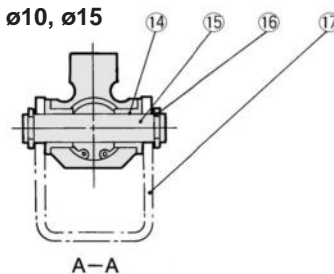
CJP \varnothing 6 to 15 (Construction is same as CJPB 6 to 15.)



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

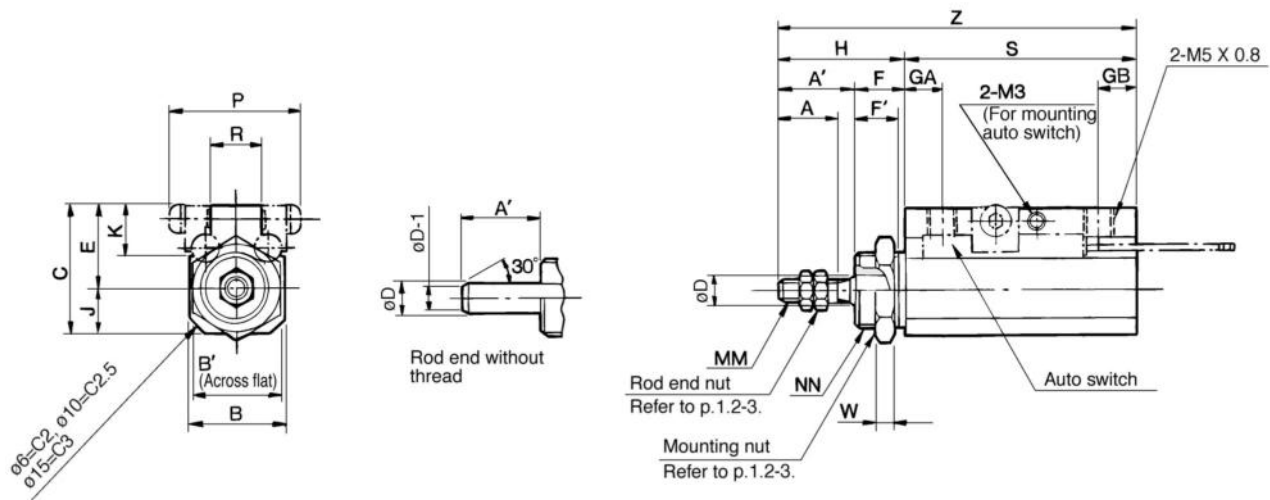
Bore size (mm)	Kit No.	Remarks
6	CJPB6D-PS	Set of the above No.⑱, ⑲, ⑳
10	CJPB10D-PS	
15	CJPB15D-PS	

* 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

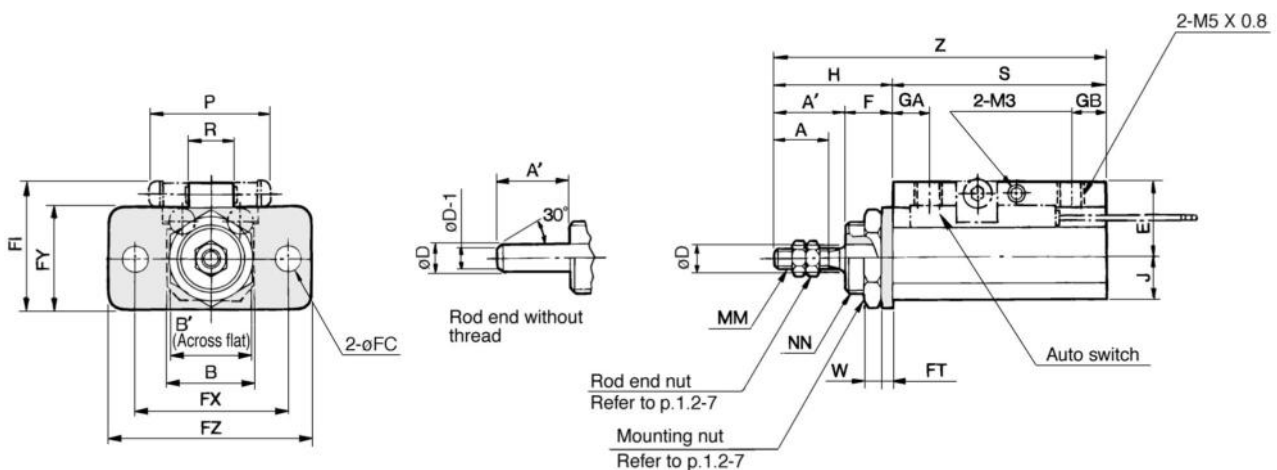
Bore (mm)	W	Z					With auto switch		
		5 st	10 st	15 st	20 st	30 st	C	E	P
6	3	47.5	52.5	57.5	62.5	—	16.5	10.5	20
10	3	50.5	55.5	60.5	65.5	75.5	20	13	21
15	4	54.5	59.5	64.5	69.5	79.5	24.5	15.5	23

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

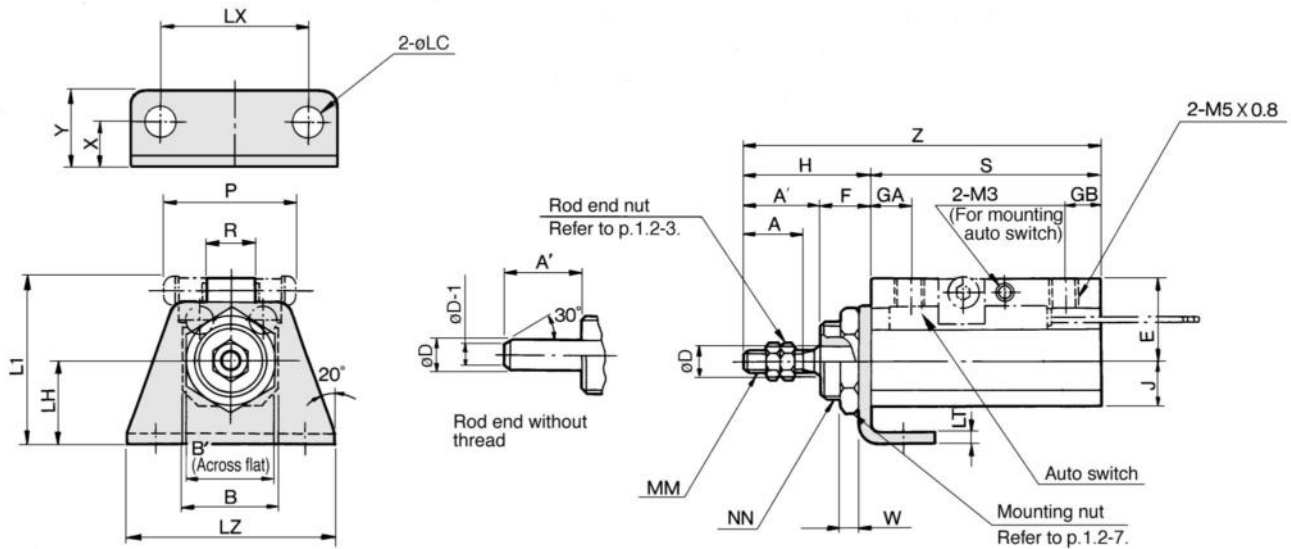
CJPF6.....SCJP6, #2
 CJPF10.....SCJP10, #2
 CJPF15.....SCJP15, #2

Series CJP

Foot



C□JPL



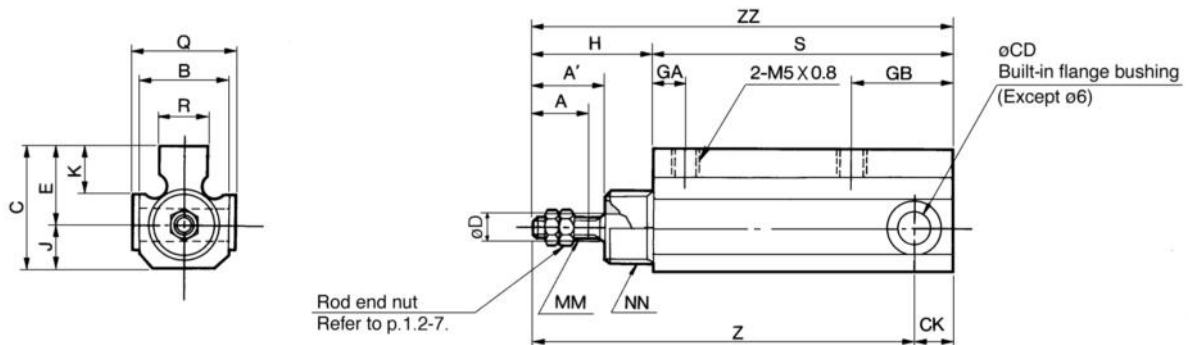
Bore (mm)	A	A'	B	B'	D	E	F	GA	GB	H	MM	NN	R	X	Y	LC	LH	LT	LX	LZ
6	7	9	14	14	3	10.5	8	6	6	17	M3 X 0.5	M10 X 1.0	7	6.5	10.5	3.4	11	1.6	20	28
10	10	12	15	17	5	13	8	6	7	20	M4 X 0.7	M12 X 1.0	8	7	12	4.5	13	1.6	24	33
15	12	14	20	19	6	15.5	10	6	7	24	M5 X 0.8	M14 X 1.0	10	10	16.5	5.5	18	2.3	30	43

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

CJPL6.....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

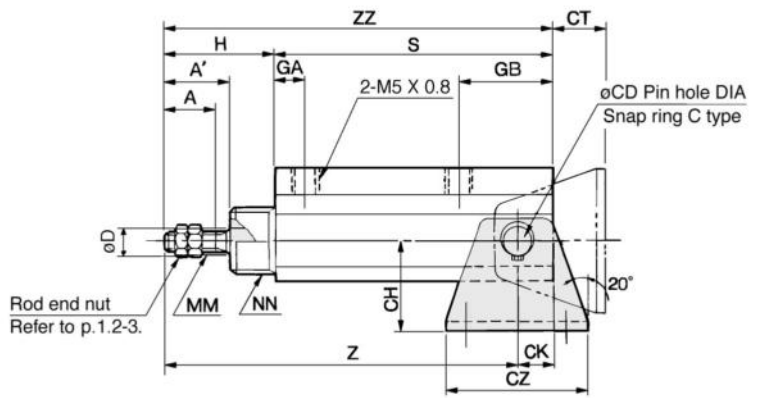
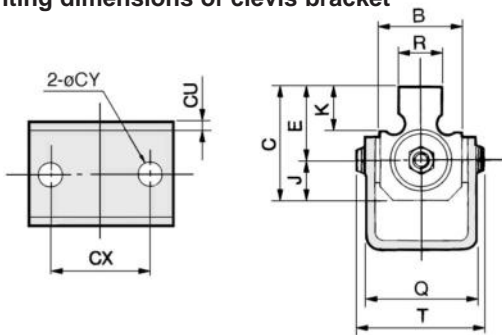
CJPD6.....SCJP6, #4
CJPD10.....SCJP10, #4
CJPD15.....SCJP15, #4

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

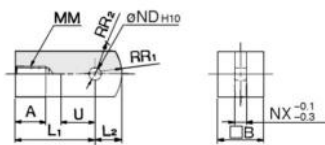
Bore (mm)	S					Z					ZZ					R
	5 st	10 st	15 st	20 st	30 st	5 st	10 st	15 st	20 st	30 st	5 st	10 st	15 st	20 st	30 st	
6	35.5	40.5	45.5	50.5	—	48.5	53.5	58.5	63.5	—	52.5	57.5	62.5	67.5	—	7
10	40.5	45.5	50.5	55.5	65.5	54	59	64	69	79	60.5	65.5	70.5	75.5	85.5	8
15	42	47	52	57	67	58	63	68	73	83	66	71	76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

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

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

Accessories

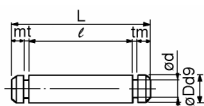
Single Knuckle Joint



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

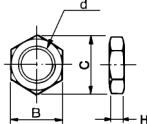
Knuckle Pin



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

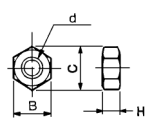
Mounting Nut



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

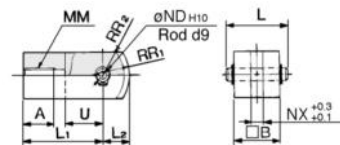
Rod End Nut



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

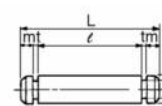


* Knuckle pin and snap ring are sent together.

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



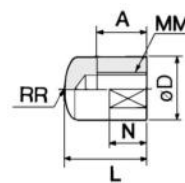
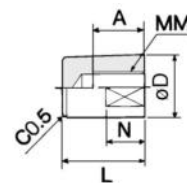
Material: Stainless steel

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