

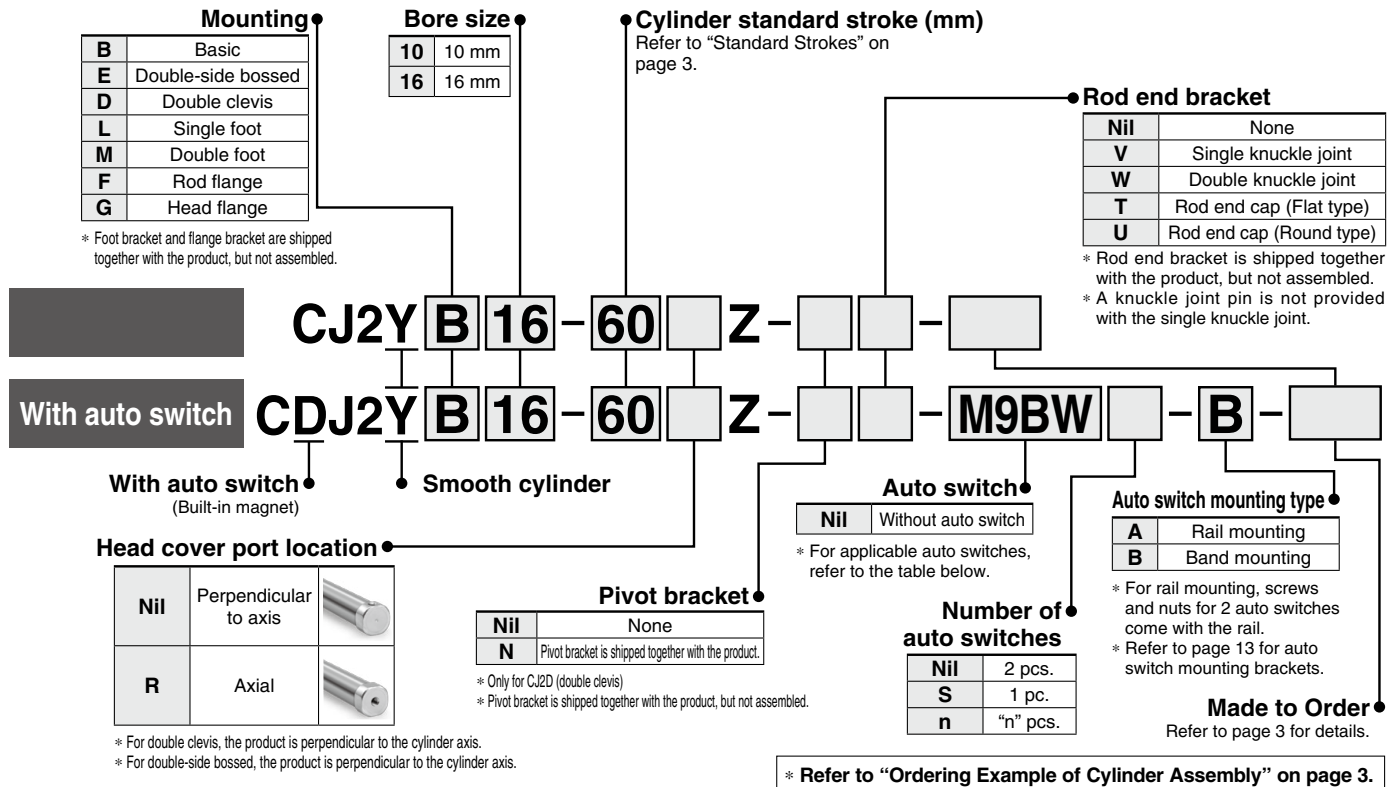
Smooth Cylinder

Double Acting, Single Rod

Series CJ2Y

ø10, ø16

How to Order



Applicable Auto Switches/Refer to the WEB catalog or Best Pneumatics No. 3 for further information on auto switches.

Type	Special function	Electrical entry	Indicator/light	Wiring (Output)	Load voltage		Auto switch model				Lead wire length (m)					Pre-wired connector	Applicable load				
					DC	AC	Band mounting		Rail mounting		0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)						
							Perpendicular	In-line	Perpendicular	In-line											
Solid state auto switch	—	Grommet	—	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	M9NV	M9N	●	●	●	○	—	IC circuit	Relay, PLC				
				3-wire (PNP)			M9PV	M9P	M9PV	M9P	●	●	●	○	—						
		Connector		2-wire			12 V	—	H7C	J79C	—	●	—	●	●			—	—		
	Diagnostic indication (2-color indication)	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9NWV	M9NW	M9NWV	M9NW	●	●	●	○	—	IC circuit					
				3-wire (PNP)			M9PWV	M9PW	M9PWV	M9PW	●	●	●	○	—						
				2-wire			M9BVV	M9BW	M9BVV	M9BW	●	●	●	○	—						
	Water resistant (2-color indication)	Grommet	—	3-wire (NPN)	5 V, 12 V	—	M9NAV*1	M9NA*1	M9NAV*1	M9NA*1	○	○	●	○	—	IC circuit					
				3-wire (PNP)			M9PAV*1	M9PA*1	M9PAV*1	M9PA*1	○	○	●	○	—						
				2-wire			M9BAV*1	M9BA*1	M9BAV*1	M9BA*1	○	○	●	○	—						
With diagnostic output (2-color indication)	—	—	4-wire (NPN)	5 V, 12 V	—	H7NF	—	F79F	●	—	●	○	—	IC circuit							
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	5 V	—	A96V	A96	A96V	A96	●	—	●	—	—	IC circuit	—				
				2-wire			24 V	12 V	—	—	A72	A72H	●	—	●			—	—	—	
									100 V	A93V*2	A93	A93V*2	A93	●	●			●	●	—	—
									100 V or less	A90V	A90	A90V	A90	●	—			●	—	—	IC circuit
									—	—	C73C	A73C	—	●	—			●	●	—	—
				24 V or less			—	C80C	A80C	—	●	—	●	●	—			IC circuit			
				—			—	—	—	A79W	—	—	—	●	—			●	—	—	

*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance. Please consult with SMC regarding water resistant types with the above model numbers.

*2 1 m type lead wire is only applicable to D-A93.

* Lead wire length symbols: 0.5 m Nil (Example) M9NW 5 m Z (Example) M9NWZ
1 m M (Example) M9NWM None N (Example) H7CN
3 m L (Example) M9NWL

* Since there are other applicable auto switches than listed above, refer to page 14 for details.

* For details about auto switches with pre-wired connector, refer to the WEB catalog or Best Pneumatics No. 3.

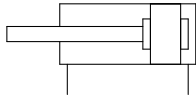
* Solid state auto switches marked with "○" are produced upon receipt of order.

* The D-A9□□/M9□□□/A7□□/A80□□/F7□□/J7□□ auto switches are shipped together, (but not assembled). (For band mounting, only the auto switch mounting brackets are assembled before shipment.)



Symbol

Rubber bumper



Made to Order

(For details, refer to pages 174 to 191.)

Symbol	Specifications
-XA	Change of rod end shape
-XC3	Special port location
-XC9	Adjustable stroke cylinder/Adjustable retraction type

Mounting Brackets/Part No.

Mounting bracket	Bore size (mm)	
	10	16
Foot	CJ-L010C	CJ-L016C
Flange	CJ-F010C	CJ-F016C
T-bracket*	CJ-T010C	CJ-T016C

* A T-bracket is used with double clevis (D).

Specifications

Bore size (mm)	10	16
Action	Double acting, Single rod	
Fluid	Air	
Proof pressure	1.05 MPa	
Maximum operating pressure	0.7 MPa	
Ambient and fluid temperature	Without auto switch: -10°C to 70°C With auto switch: -10°C to 60°C (No freezing)	
Cushion	Rubber bumper (Standard equipment)	
Lubrication	Not required (Non-lube)	
Stroke length tolerance	+1.0 0	
Piston speed	5 to 500 mm/s	
Allowable kinetic energy	ø10	0.035 J
	ø16	0.090 J

Minimum Operating Pressure

Unit: MPa

Bore size (mm)	10	16
Minimum operating pressure	0.03	

Standard Strokes

Bore size (mm)	Standard stroke (mm)	Maximum manufacturable stroke (mm)
10	15, 30, 45, 60, 75, 100, 125, 150	400
16	15, 30, 45, 60, 75, 100, 125, 150, 175, 200	400

Note 1) Manufacture of intermediate strokes at 1 mm intervals is possible. (Spacers are not used.)
Note 2) Applicable strokes should be confirmed according to the usage. For details, refer to "Air Cylinders Model Selection" on front matter pages of the Best Pneumatics No. 2 or the **WEB catalog**. In addition, the products that exceed the standard stroke might not be able to fulfill the specifications due to the deflection etc.

Mounting and Accessories / For details, refer to page 8.

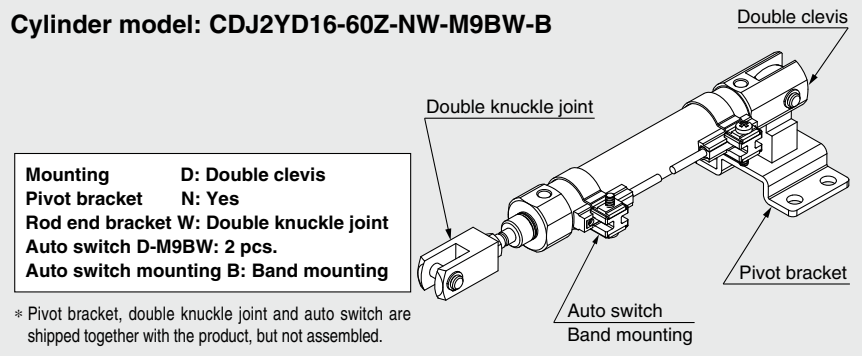
●...Mounted on the product. ○...Please order these separately.

	Mounting	Basic	Foot	Flange	Double* clevis
		●	●	●	●
Standard	Mounting nut	●	●	●	—
	Rod end nut	●	●	●	●
	Clevis pin	—	—	—	●
Option	Single knuckle joint	○	○	○	○
	Double knuckle joint*	○	○	○	○
	Rod end cap (Flat/Round type)	○	○	○	○
	T-bracket	—	—	—	○

* A pin and retaining rings are included with double clevis and/or double knuckle joint.

Ordering Example of Cylinder Assembly

Cylinder model: CDJ2YD16-60Z-NW-M9BW-B



Mounting D: Double clevis
Pivot bracket N: Yes
Rod end bracket W: Double knuckle joint
Auto switch D-M9BW: 2 pcs.
Auto switch mounting B: Band mounting

* Pivot bracket, double knuckle joint and auto switch are shipped together with the product, but not assembled.

CJ2Y-Z
 CM2Y-Z
 CG1Y-Z
 MBY-Z
 CA2Y-Z
 CS2Y
 CQSY
 CQ2Y-Z
 CJ2X-Z
 CM2X-Z
 CQSX
 CQ2X
 CUX
 Auto Switch
 Made to Order

⚠️ Precautions

Be sure to read before handling. Refer to back cover for Safety Instructions. For Actuator and Auto Switch Precautions, refer to “Handling Precautions for SMC Products” and the Operation Manual on SMC website, <http://www.smcworld.com>

Mounting

⚠️ Caution

- During installation, secure the rod cover and tighten by applying an appropriate tightening force to the retaining nut or to the rod cover body.
If the head cover is secured or the head cover is tightened, the cover could rotate, leading to the deviation.
- Tighten the retaining screws to an appropriate tightening torque within the range given below. Apply a Loctite® (no. 242 Blue) for mounting thread.

Bore size (mm)	Proper tightening torque for mounting thread (N·m) (Tightening torque for mounting nut)
10	3.0 to 3.2
16	5.4 to 5.9

- To remove and install the retaining ring for the knuckle pin or the clevis pin, use an appropriate pair of pliers (tool for installing a type C retaining ring).
Especially with ø10, use ultra thin pliers.
- In the case of auto switch rail mounting type, do not remove the rail that is mounted. Because retaining screws extend into the cylinder, this could lead to an air leak.

Weights

Bore size (mm)		10	16
Basic weight (When the stroke is zero)	Basic	22	46
	Axial piping	22	46
	Double clevis (including clevis pin)	24	54
	Head-side bossed	23	48
Additional weight per 15 mm of stroke	Single foot	4	7
	Double foot	8	25
Mounting bracket weight	Rod flange	16	50
	Head flange	5	13
	Head flange	5	13
Accessories	Single knuckle joint	17	23
	Double knuckle joint (including knuckle pin)	25	21
	Rod end cap (Flat type)	1	2
	Rod end cap (Round type)	1	2
	T-bracket	32	50

* Mounting nut and rod end nut are included in the basic weight.
Note) Mounting nut is not included in the basic weight for the double clevis.

Calculation: Example) **CJ2YL10-45Z**

- Basic weight..... 22 (ø10)
 - Additional weight..... 4/15 stroke
 - Cylinder stroke..... 45 stroke
 - Mounting bracket weight..... 8 (Axial foot)
- $22 + 4/15 \times 45 + 8 = 42 \text{ g}$

Smooth Cylinders

- CJ2Y-Z
- CM2Y-Z
- CG1Y-Z
- MBY-Z
- CA2Y-Z
- CS2Y
- CQSY
- CQ2Y-Z

Low Speed Cylinders

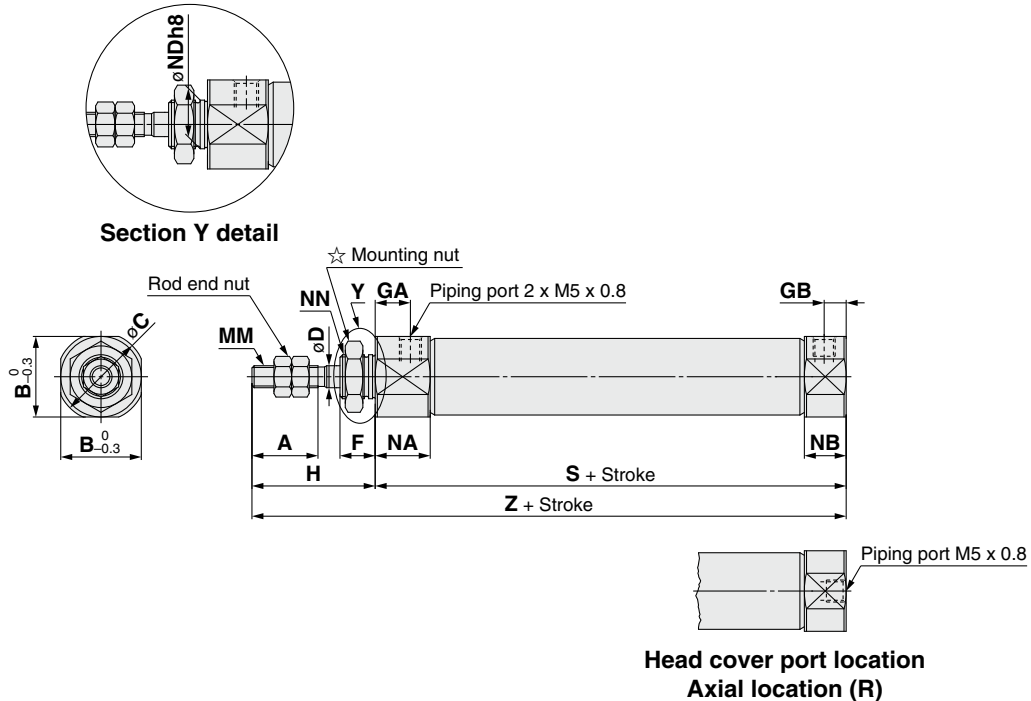
- CJ2X-Z
- CM2X-Z
- CQSX
- CQ2X
- CUX
- Auto Switch
- Made to Order

Series CJ2Y

Dimensions

Basic (B)

CJ2YB Bore size – Stroke Head cover port location Z



Head cover port location Axial location (R)

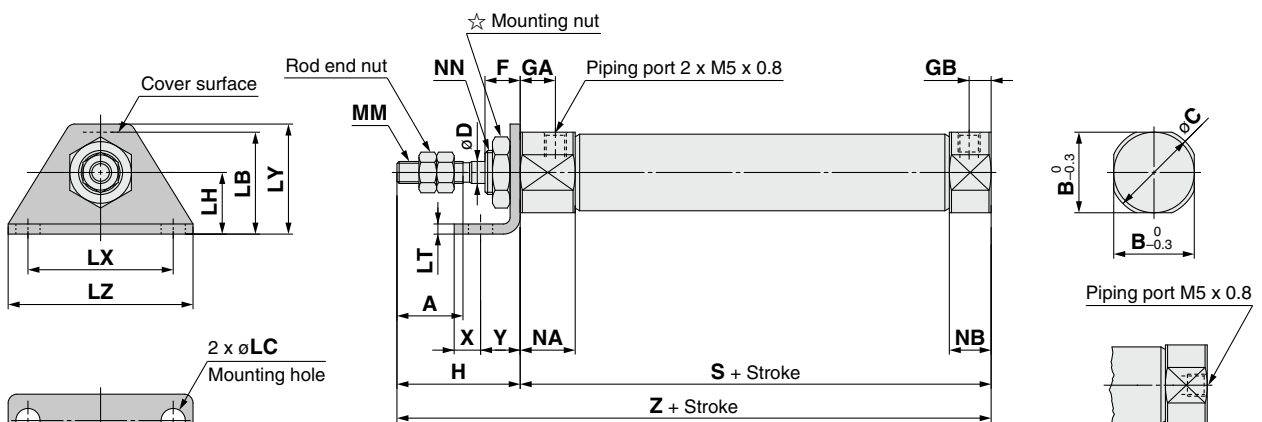
* The overall cylinder length does not change.

☆ Refer to page 8 for details of the mounting nut.

Bore size	A	B	C	D	F	GA	GB	H	MM	NA	NB	NDh8	NN	S	Z
10	15	12	14	4	8	8	5	28	M4 x 0.7	12.5	9.5	8 ⁰ _{-0.022}	M8 x 1.0	46	74
16	15	18.3	20	5	8	8	5	28	M5 x 0.8	12.5	9.5	10 ⁰ _{-0.022}	M10 x 1.0	47	75

Single foot (L)

CJ2YL Bore size – Stroke Head cover port location Z



Head cover port location Axial location (R)

* The overall cylinder length does not change.

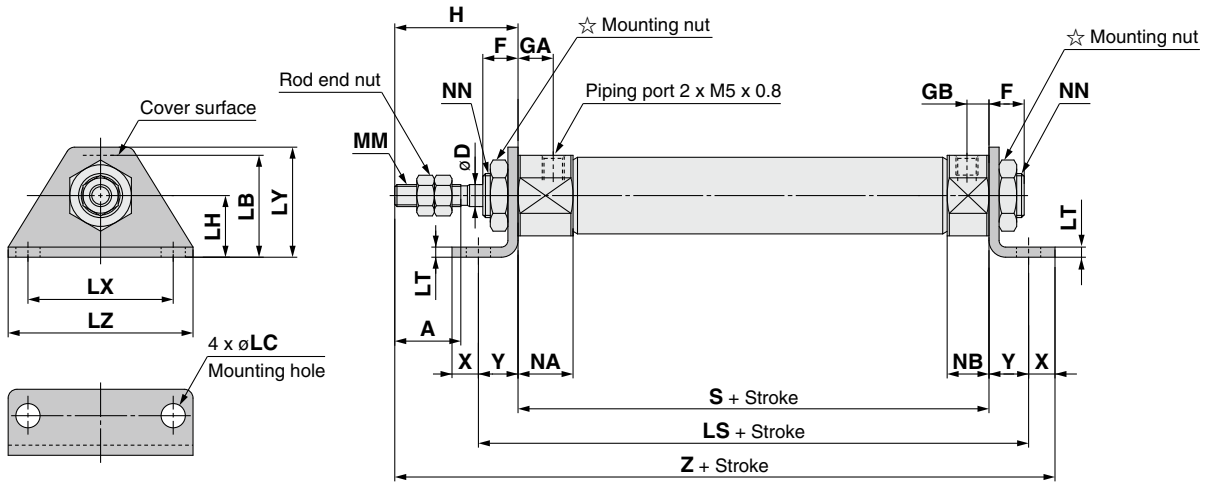
☆ Refer to page 8 for details of the mounting nut.

Bore size	A	B	C	D	F	GA	GB	H	LB	LC	LH	LT	LX	LY	LZ	MM	NA	NB	NN	S	X	Y	Z
10	15	12	14	4	8	8	5	28	15	4.5	9	1.6	24	16.5	32	M4 x 0.7	12.5	9.5	M8 x 1.0	46	5	7	74
16	15	18.3	20	5	8	8	5	28	23	5.5	14	2.3	33	25	42	M5 x 0.8	12.5	9.5	M10 x 1.0	47	6	9	75

Dimensions

Double foot (M)

CJ2YM Bore size – Stroke Z

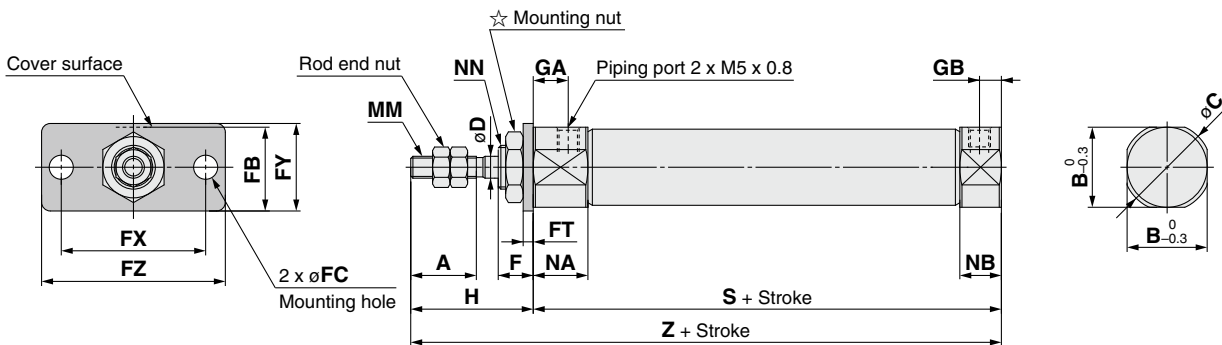


☆ Refer to page 8 for details of the mounting nut.

Bore size	A	D	F	GA	GB	H	LB	LC	LH	LS	LT	LX	LY	LZ	MM	NA	NB	NN	S	X	Y	Z
10	15	4	8	8	5	28	15	4.5	9	60	1.6	24	16.5	32	M4 x 0.7	12.5	9.5	M8 x 1.0	46	5	7	86
16	15	5	8	8	5	28	23	5.5	14	65	2.3	33	25	42	M5 x 0.8	12.5	9.5	M10 x 1.0	47	6	9	90

Rod flange (F)

CJ2YF Bore size – Stroke Head cover port location Z



Piping port M5 x 0.8

Head cover port location Axial location (R)

* The overall cylinder length does not change.

☆ Refer to page 8 for details of the mounting nut.

Bore size	A	B	C	D	F	FB	FC	FT	FX	FY	FZ	GA	GB	H	MM	NA	NB	NN	S	Z
10	15	12	14	4	8	13	4.5	1.6	24	14	32	8	5	28	M4 x 0.7	12.5	9.5	M8 x 1.0	46	74
16	15	18.3	20	5	8	19	5.5	2.3	33	20	42	8	5	28	M5 x 0.8	12.5	9.5	M10 x 1.0	47	75

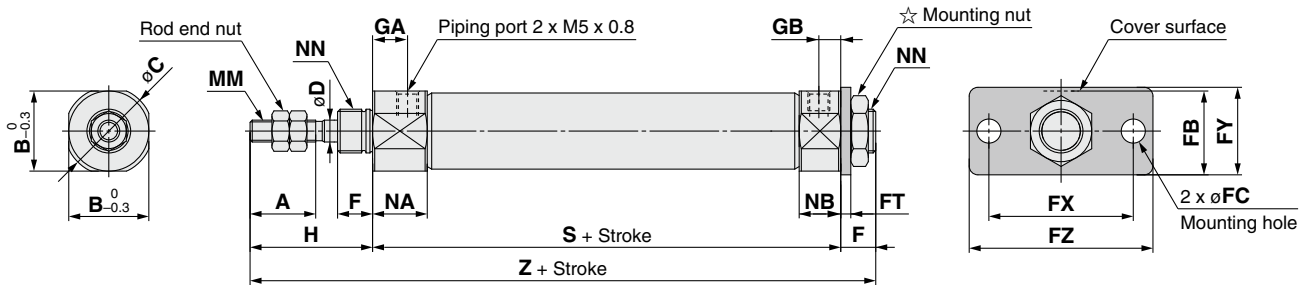
- CJ2Y-Z
- CM2Y-Z
- CG1Y-Z
- MBY-Z
- CA2Y-Z
- CS2Y
- CQSY
- CQ2Y-Z
- CJ2X-Z
- CM2X-Z
- CQSX
- CQ2X
- CUX
- Auto Switch
- Made to Order

Series CJ2Y

Dimensions

Head flange (G)

CJ2YG Bore size – Stroke Z

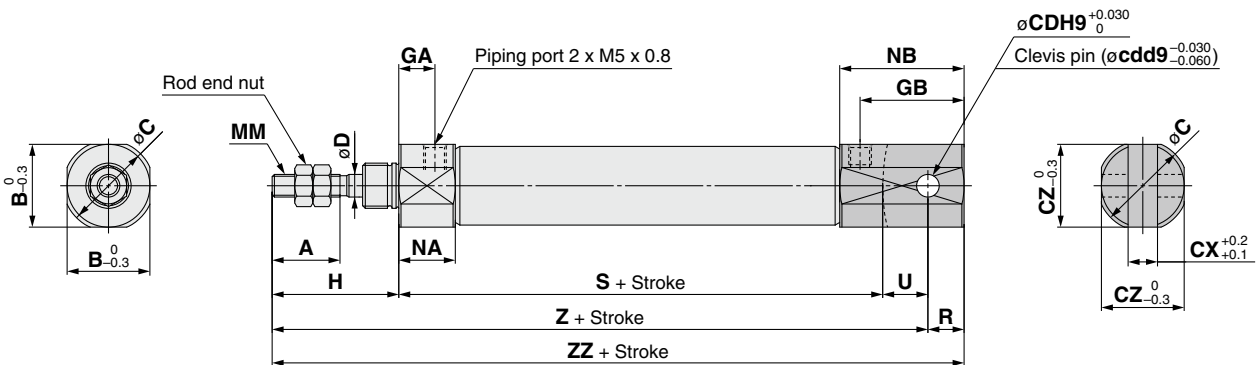


☆ Refer to page 8 for details of the mounting nut.

Bore size	A	B	C	D	F	FB	FC	FT	FX	FY	FZ	GA	GB	H	MM	NA	NB	NN	S	Z
10	15	12	14	4	8	13	4.5	1.6	24	14	32	8	5	28	M4 x 0.7	12.5	9.5	M8 x 1.0	46	82
16	15	18.3	20	5	8	19	5.5	2.3	33	20	42	8	5	28	M5 x 0.8	12.5	9.5	M10 x 1.0	47	83

Double clevis (D)

CJ2YD Bore size – Stroke Z



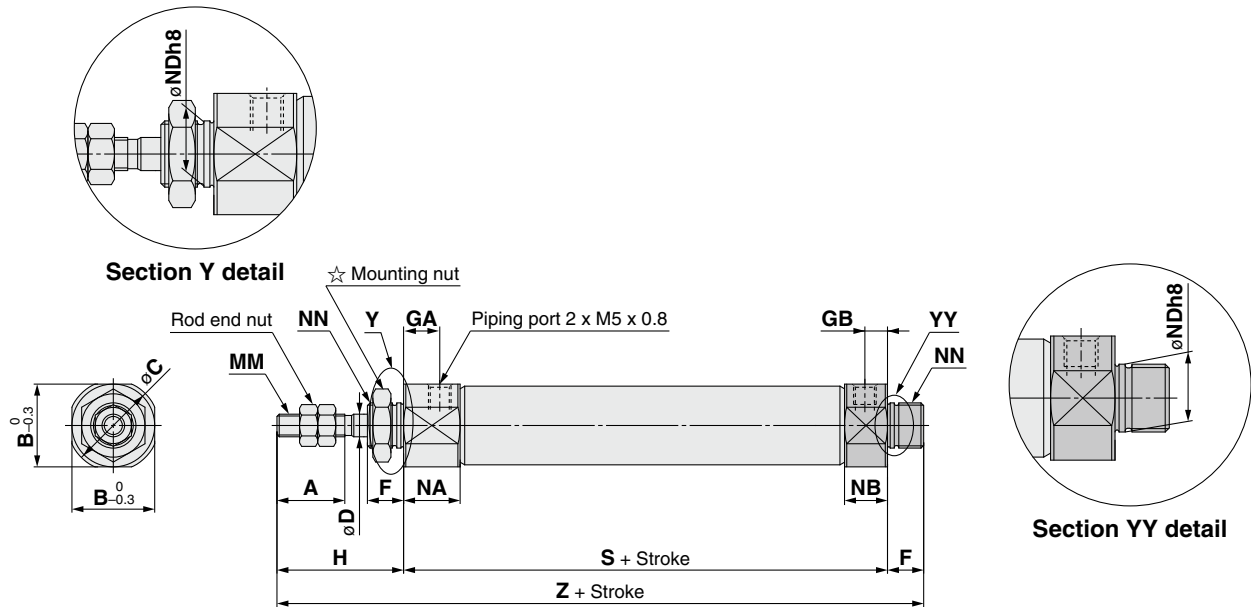
* A clevis pin and retaining rings are included.

Bore size	A	B	C	CD (cd)	CX	CZ	D	GA	GB	H	MM	NA	NB	R	S	U	Z	ZZ
10	15	12	14	3.3	3.2	12	4	8	18	28	M4 x 0.7	12.5	22.5	5	46	8	82	87
16	15	18.3	20	5	6.5	18.3	5	8	23	28	M5 x 0.8	12.5	27.5	8	47	10	85	93

Dimensions

Double-side bossed (E)

CJ2YE Bore size – Stroke Z



☆ Refer to page 8 for details of the mounting nut.

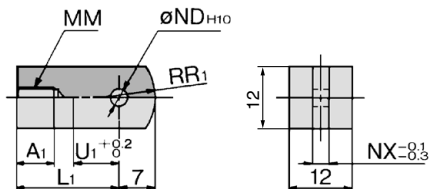
Bore size	A	B	C	D	F	GA	GB	H	MM	NA	NB	NDh8	NN	S	Z
10	15	12	14	4	8	8	5	28	M4 x 0.7	12.5	9.5	$8_{-0.022}^0$	M8 x 1.0	46	82
16	15	18.3	20	5	8	8	5	28	M5 x 0.8	12.5	9.5	$10_{-0.022}^0$	M10 x 1.0	47	83

- Smooth Cylinders
- CJ2Y-Z
- CM2Y-Z
- CG1Y-Z
- MBY-Z
- CA2Y-Z
- CS2Y
- CQSY
- CQ2Y-Z
- Low Speed Cylinders
- CJ2X-Z
- CM2X-Z
- CQSX
- CQ2X
- CUX
- Auto Switch
- Made to Order

Series CJ2Y

Dimensions of Accessories

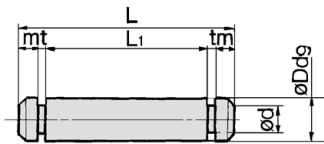
Single Knuckle Joint



Material: Rolled steel

Part no.	Applicable bore size	A ₁	L ₁	MM	ND _{H10}	NX	R ₁	U ₁
I-J010C	10	8	21	M4 x 0.7	3.3 ^{+0.048} ₀	3.1	8	9
I-J016C	16	8	25	M5 x 0.8	5 ^{+0.048} ₀	6.4	12	14

Clevis Pin

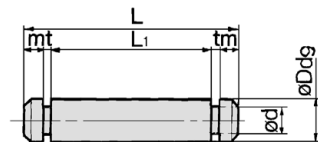


Material: Stainless steel

Part no.	Applicable bore size	Dd ₉	d	L	L ₁	m	t	Included retaining ring
CD-J010	10	3.3 ^{-0.030} _{-0.060}	3	15.2	12.2	1.2	0.3	Type C 3.2
CD-Z015	16	5 ^{-0.030} _{-0.060}	4.8	22.7	18.3	1.5	0.7	Type C 5

* Retaining rings are included with a clevis pin.

Knuckle Pin



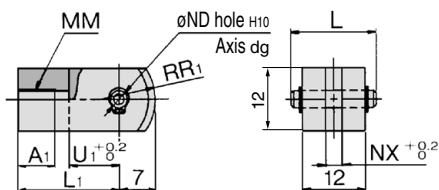
Material: Stainless steel

Part no.	Applicable bore size	Dd ₉	d	L	L ₁	m	t	Included retaining ring
CD-J010	10	3.3 ^{-0.030} _{-0.060}	3	15.2	12.2	1.2	0.3	Type C 3.2
IY-J015	16	5 ^{-0.030} _{-0.060}	4.8	16.6	12.2	1.5	0.7	Type C 5

* For size ø10, a clevis pin is diverted.

* Retaining rings are included with a knuckle pin.

Double Knuckle Joint



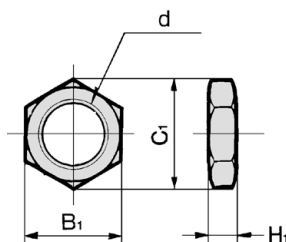
Material: Rolled steel

Part no.	Applicable bore size	A ₁	L	L ₁	MM
Y-J010C	10	8	15.2	21	M4 x 0.7
Y-J016C	16	11	16.6	21	M5 x 0.8

Part no.	ND _{d9}	ND _{H10}	NX	R ₁	U ₁
Y-J010C	3.3 ^{-0.030} _{-0.060}	3.3 ^{+0.048} ₀	3.2	8	10
Y-J016C	5 ^{-0.030} _{-0.060}	5 ^{+0.048} ₀	6.5	12	10

* A knuckle pin and retaining rings are included.

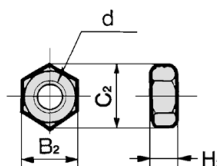
Mounting Nut



Material: Carbon steel

Part no.	Applicable bore size	B ₁	C ₁	d	H ₁
SNJ-010C	10	11	12.7	M8 x 1.0	4
SNJ-016C	16	14	16.2	M10 x 1.0	4

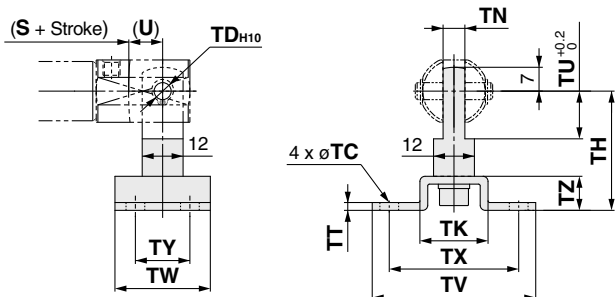
Rod End Nut



Material: Carbon steel

Part no.	Applicable bore size	B ₂	C ₂	d	H ₂
NTJ-010C	10	7	8.1	M4 x 0.7	3.2
NTJ-015C	16	8	9.2	M5 x 0.8	4

T-bracket



Part no.	Applicable bore size	TC	TD _{H10}	TH	TK	TN	TT	TU	TV	TW	TX	TY	TZ
CJ-T010C	10	4.5	3.3 ^{+0.048} ₀	29	18	3.1	2	9	40	22	32	12	8
CJ-T016C	16	5.5	5 ^{+0.048} ₀	35	20	6.4	2.3	14	48	28	38	16	10

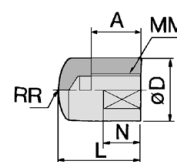
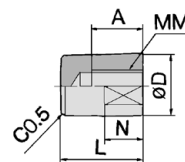
* A T-bracket includes a T-bracket base, single knuckle joint, hexagon socket head bolt and spring washer.

* For dimensions of (U) and (S + Stroke), refer to the double clevis drawing on page 6.

Rod End Cap

Flat type/CJ-CF□□□

Round type/CJ-CR□□□



Material: Polyacetal

Part no.	Applicable bore size	A	D	L	MM	N	R	W
CJ-CF010	10	8	10	13	M4 x 0.7	6	10	8
CJ-CF016	16	10	12	15	M5 x 0.8	7	12	10

Series CJ2Y

Auto Switch Mounting

Auto Switch Proper Mounting Position (Detection at stroke end) and Its Mounting Height

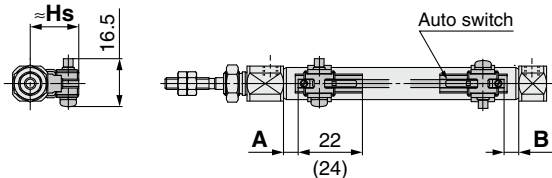
Solid state auto switch

<Band mounting>

D-M9□

D-M9□W

D-M9□A

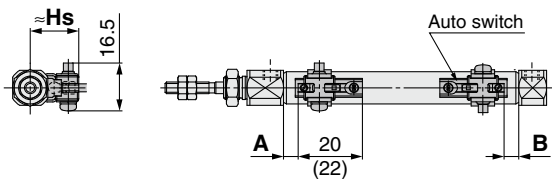


(): Dimension of the D-M9□A
A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.

D-M9□V

D-M9□MV

D-M9□AV



(): Dimension of the D-M9□AV
A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.

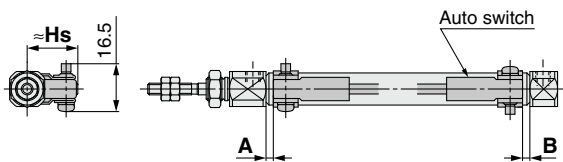
D-H7□

D-H7□W

D-H7BA

D-H7NF

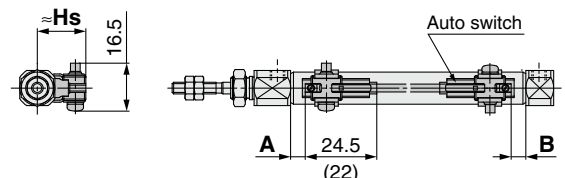
D-H7C



Reed auto switch

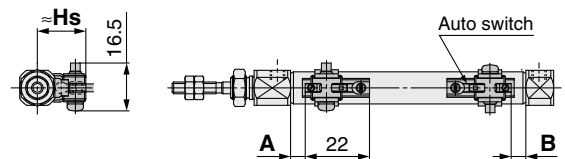
<Band mounting>

D-A9□



(): Dimension of the D-A9E
A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.

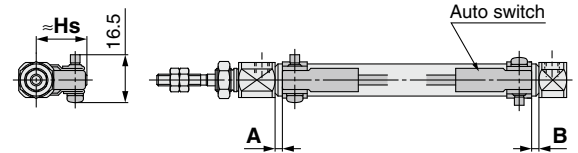
D-A9□V



A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.

D-C7□/C80

D-C73C□/C80C



CJ2Y-Z

CM2Y-Z

CG1Y-Z

MBY-Z

CA2Y-Z

CS2Y

CQSY

CQ2Y-Z

CJ2X-Z

CM2X-Z

CQSX

CQ2X

CUX

Auto Switch

Made to Order

Smooth Cylinders

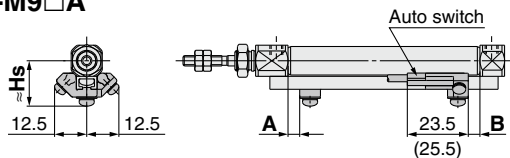
Low Speed Cylinders

Series CJ2Y

Auto Switch Proper Mounting Position (Detection at stroke end) and Its Mounting Height

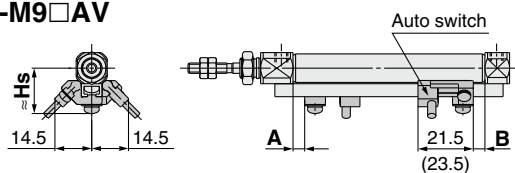
<Rail mounting>

D-M9□
D-M9□W
D-M9□A



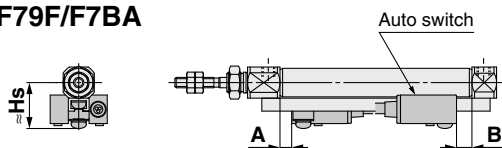
() : Dimension of the D-M9□A

D-M9□V
D-M9□WV
D-M9□AV

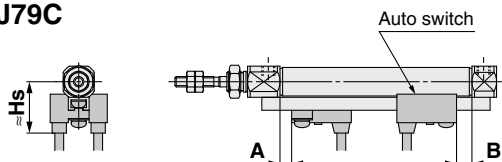


() : Dimension of the D-M9□AV

D-F7□/J79
D-F7□W/J79W
D-F79F/F7BA

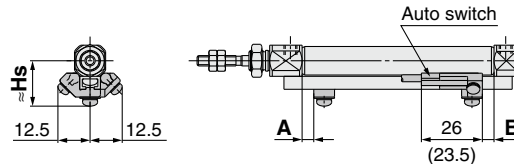


D-F7□V/F7□WV
D-F7BAV
D-J79C



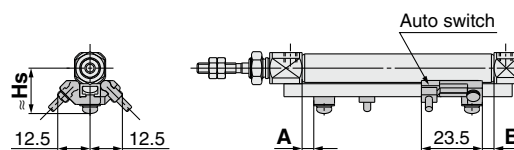
<Rail mounting>

D-A9□

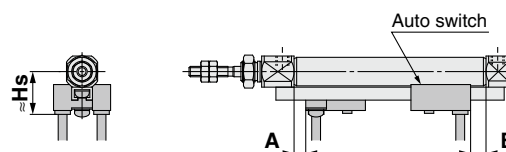


() : Dimension of the D-A96

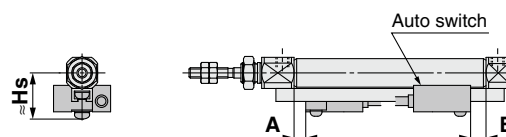
D-A9□V



D-A7□/A80
D-A73C/A80C
D-A79W



D-A7□H/A80H



Auto Switch Proper Mounting Position (Detection at stroke end) and Its Mounting Height

Auto Switch Proper Mounting Position (mm)

Auto switch model	Band mounting							
	D-M9□ D-M9□V D-M9□W D-M9□WV D-M9□A D-M9□AV		D-A9□ D-A9□V		D-C7□ D-C80 D-C73C D-C80C		D-H7□ D-H7C D-H7NF D-H7□W D-H7BA	
Bore size	A	B	A	B	A	B	A	B
10	(5) 6	(5) 6	(1) 2	(1) 2	2.5	2.5	1.5	1.5
16	(5.5) 6.5	(5.5) 6.5	(1.5) 2.5	(1.5) 2.5	3	3	2	2

* The values in () are measured from the end of the auto switch mounting bracket.

Auto switch model	Rail mounting											
	D-M9□ D-M9□V D-M9□W D-M9□WV D-M9□A D-M9□AV		D-A9□ D-A9□V		D-A7□ D-A80		D-A7□H/A80H D-A73C/A80C D-F7□/J79 D-F7□W/J79W D-F7□V/F7□WV D-F79F D-J79C D-F7BA D-F7BAV		D-F7NT		D-A79W	
Bore size	A	B	A	B	A	B	A	B	A	B	A	B
10	4.5	4.5	0.5	0.5	3	3	3.5	3.5	8.5	8.5	0.5	0.5
16	5	5	1	1	3.5	3.5	4	4	9	9	1	1

* Adjust the auto switch after confirming the operating condition in the actual setting.

Auto Switch Mounting Height (mm)

Auto switch model	Band mounting					
	D-M9□ D-M9□W D-M9□A D-A9□	D-M9□V D-M9□WV D-M9□AV D-A9□V	D-C7□/C80 D-H7□/H7□W D-H7NF D-H7BA	D-C73C D-C80C	D-H7C	D-A7□ D-A80
Bore size	Hs	Hs	Hs	Hs	Hs	Hs
10	17	18	17	19.5	20	16.5
16	20.5	21	20.5	23	23.5	19.5

Auto switch model	Rail mounting					
	D-M9□ D-M9□V D-M9□W D-M9□WV D-M9□A D-M9□AV D-A9□ D-A9□V	D-A7□H/A80H D-F7□/J79 D-F7□W/J79W D-F7BA/F79F D-F7NT	D-A73C D-A80C	D-F7□V D-F7□WV D-F7BAV	D-J79C	D-A79W
Bore size	Hs	Hs	Hs	Hs	Hs	Hs
10	17.5	17.5	23.5	20	23	19
16	21	20.5	26.5	23	26	22

CJ2Y-Z
 CM2Y-Z
 CG1Y-Z
 MBY-Z
 CA2Y-Z
 CS2Y
 CQSY
 CQ2Y-Z
 CJ2X-Z
 CM2X-Z
 CQSX
 CQ2X
 CUX
 Auto Switch
 Made to Order

Minimum Stroke for Auto Switch Mounting

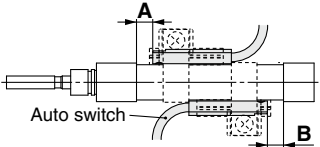
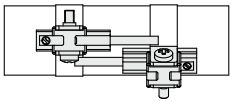
		(mm)				
Auto switch mounting	Auto switch model	Number of auto switches				
		With 1 pc.	With 2 pcs.		With n pcs. (n: Number of auto switches)	
			Different surfaces	Same surface	Different surfaces	Same surface
Band mounting	D-M9□ D-M9□W D-M9□A D-A9□	10	15 Note 1)	45 Note 1)	$15 + 35 \frac{(n-2)}{2}$ (n = 2, 4, 6... Note 3)	$45 + 15 (n-2)$ (n = 2, 3, 4, 5...)
	D-M9□V	5	15 Note 1)	35	$15 + 35 \frac{(n-2)}{2}$ (n = 2, 4, 6... Note 3)	$35 + 25 (n-2)$ (n = 2, 3, 4, 5...)
	D-M9□WV D-M9□AV	10	15 Note 1)	35	$15 + 35 \frac{(n-2)}{2}$ (n = 2, 4, 6... Note 3)	$35 + 25 (n-2)$ (n = 2, 3, 4, 5...)
	D-A9□V	5	10	35	$10 + 35 \frac{(n-2)}{2}$ (n = 2, 4, 6... Note 3)	$35 + 25 (n-2)$ (n = 2, 3, 4, 5...)
	D-C7□ D-C80	10	15	50	$15 + 40 \frac{(n-2)}{2}$ (n = 2, 4, 6... Note 3)	$50 + 20 (n-2)$ (n = 2, 3, 4, 5...)
	D-H7□/H7□W D-H7BA D-H7NF	10	15	60	$15 + 45 \frac{(n-2)}{2}$ (n = 2, 4, 6... Note 3)	$60 + 22.5 (n-2)$ (n = 2, 3, 4, 5...)
	D-C73C D-C80C D-H7C	10	15	65	$15 + 50 \frac{(n-2)}{2}$ (n = 2, 4, 6... Note 3)	$50 + 27.5 (n-2)$ (n = 2, 3, 4, 5...)
Rail mounting	D-M9□V	5	—	5	—	$10 + 10 (n-2)$ (n = 4, 6... Note 4)
	D-A9□V	5	—	10	—	$10 + 15 (n-2)$ (n = 4, 6... Note 4)
	D-M9□ D-A9□	10	—	10	—	$15 + 15 (n-2)$ (n = 4, 6... Note 4)
	D-M9□WV D-M9□AV	10	—	15	—	$15 + 15 (n-2)$ (n = 4, 6... Note 4)
	D-M9□W	15	—	15	—	$20 + 15 (n-2)$ (n = 4, 6... Note 4)
	D-M9□A	15	—	20	—	$20 + 15 (n-2)$ (n = 4, 6... Note 4)
	D-A7□/A80 D-A7□H/A80H D-A73C/A80C	5	—	10	—	$15 + 10 (n-2)$ (n = 4, 6... Note 4)
	D-A7□H D-A80H	5	—	10	—	$15 + 15 (n-2)$ (n = 4, 6... Note 4)
	D-A79W	10	—	15	—	$10 + 15 (n-2)$ (n = 4, 6... Note 4)
	D-F7□ D-J79	5	—	5	—	$15 + 15 (n-2)$ (n = 4, 6... Note 4)
	D-F7□V D-J79C	5	—	5	—	$10 + 10 (n-2)$ (n = 4, 6... Note 4)
	D-F7□W/J79W D-F7BA/F79F/F7NT	10	—	15	—	$15 + 20 (n-2)$ (n = 4, 6... Note 4)
D-F7□WV D-F7BAV	10	—	15	—	$10 + 15 (n-2)$ (n = 4, 6... Note 4)	

Note 3) When "n" is an odd number, an even number that is one larger than this odd number is used for the calculation.

Note 4) When "n" is an odd number, an even number that is one larger than this odd number is used for the calculation.

However, the minimum even number is 4. So, 4 is used for the calculation when "n" is 1 to 3.

Note 1) Auto switch mounting

Auto switch model	With 2 auto switches	
	Different surfaces Note 1)	Same surface Note 1)
	 <p>The proper auto switch mounting position is 5.5 mm inward from the switch holder edge. The above A and B indicate values for band mounting in the table of page 11.</p>	 <p>The auto switch is mounted by slightly displacing it in a direction (cylinder tube circumferential exterior) so that the auto switch and lead wire do not interfere with each other.</p>
D-M9□/M9□W/M9□A	Less than 20 stroke Note 2)	Less than 55 stroke Note 2)
D-A90/A93	—	Less than 50 stroke Note 2)

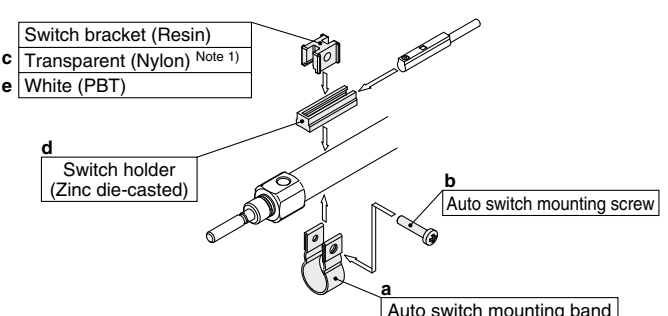
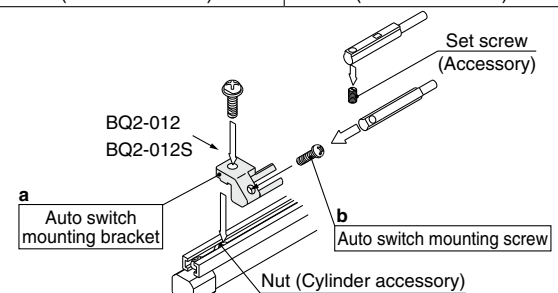
Note 2) Minimum stroke for auto switch mounting in styles other than those mentioned in Note 1.

Operating Range

Auto switch model		Bore size (mm)	
		10	16
Band mounting	D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV	2.5	3
	D-A9□	6	7
	D-C7□/C80/C73C/C80C	7	7
	D-H7□/H7□W D-H7BA/H7NF	4	4
	D-H7C	8	9
	Rail mounting	D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV	3
D-A9□/A9□V		6	6.5
D-A7□/A80/A7H/A80H D-A73C/A80C		8	9
D-A79W		11	13
D-F7□/J79/F7□W/J79W D-F7□V/F7□WV/F79F D-J79C/F7BA/F7BAV D-F7NT		5	5

* Values which include hysteresis are for guideline purposes only, they are not a guarantee (assuming approximately ±30% dispersion) and may change substantially depending on the ambient environment.

Auto Switch Mounting Brackets/Part No.

Auto switch mounting	Auto switch model	Bore size (mm)	
		10	16
Band mounting	D-M9□ D-M9□V D-M9□W D-M9□WV D-A9□ D-A9□V	BJ6-010 (A set of a, b, c, d)	BJ6-016 (A set of a, b, c, d)
	D-M9□A <small>Note 2)</small> D-M9□AV <small>Note 2)</small>	BJ6-010S (A set of a, b, d, e)	BJ6-016S (A set of a, b, d, e)
Band mounting			
Band mounting	D-C7□/C80 D-C73C/C80C D-H7□/H7□W D-H7BA/H7NF	BJ2-010 (A set of band and screw)	BJ2-016 (A set of band and screw)
Note 4) Rail mounting	D-M9□ D-M9□V D-M9□W D-M9□WV D-M9□A <small>Note 5)</small> D-M9□AV <small>Note 5)</small> D-A9□ D-A9□V	BQ2-012(S) (A set of a and b)	BQ2-012(S) (A set of a and b)
			

Note 1) Since the switch bracket (made from nylon) are affected in an environment where alcohol, chloroform, methylamines, hydrochloric acid or sulfuric acid is splashed over, so it cannot be used. Please contact SMC regarding other chemicals.

Note 2) Avoid the indicator LED for mounting the switch bracket. As the indicator LED is projected from the switch unit, indicator LED may be damaged if the switch bracket is fixed on the indicator LED.

Note 3) When the cylinder is shipped, the auto switch mounting bracket and the auto switch will be included.

Note 4) For the D-M9□A(V), order the BQ2-012S, which uses stainless steel mounting screws.

Band Mounting Brackets Set Part No.

Set part no.	Contents
BJ2-□□□	<ul style="list-style-type: none"> • Auto switch mounting band (a) • Auto switch mounting screw (b)
BJ4-1	<ul style="list-style-type: none"> • Switch bracket (White/PBT) (e) • Switch holder (d)
BJ5-1	<ul style="list-style-type: none"> • Switch bracket (Transparent/Nylon) (c) • Switch holder (d)

[Stainless Steel Mounting Screw]

The following stainless steel mounting screw kit is available. Use it in accordance with the operating environment. (Since the auto switch mounting bracket is not included, order it separately.)

BBA4: For D-C7/C8/H7 types

Note 5) Refer to the **WEB catalog** or Best Pneumatics No. 3 for details on the BBA4.

When the D-H7BA type auto switch is shipped independently, the BBA4 is attached.

CJ2Y-Z
 CM2Y-Z
 CG1Y-Z
 MBY-Z
 CA2Y-Z
 CS2Y
 CQSY
 CQ2Y-Z
 CJ2X-Z
 CM2X-Z
 CQSX
 CQ2X
 CUX
 Auto Switch
 Made to Order

Series CJ2Y

Other than the applicable auto switches listed in “How to Order”, the following auto switches are mountable.

Refer to the **WEB catalog** or Best Pneumatics No.3 for the detailed specifications.

Type	Mounting	Model	Electrical entry	Features
Solid state	Band mounting	D-H7A1/H7A2/H7B	Grommet (In-line)	—
		D-H7NW/H7PW/H7BW		Diagnostic indication (2-color indication)
	Rail mounting	D-F79/F7P/J79	Grommet (Perpendicular)	—
		D-F79W/F7PW/J79W		Diagnostic indication (2-color indication)
		D-F7NV/F7PV/F7BV		—
		D-F7NWW/F7BWW		Diagnostic indication (2-color indication)
Reed	Band mounting	D-C73/C76	Grommet (In-line)	—
		D-C80		Without indicator light
	Rail mounting	D-A73H/A76H	Grommet (Perpendicular)	—
		D-A80H		Without indicator light
		D-A73		—
		D-A80		Without indicator light

* With pre-wired connector is also available for solid state auto switches. For details, refer to the **WEB catalog** or Best Pneumatics No. 3.

* Normally closed (NC = b contact) solid state auto switches (D-F9G/F9H) are also available. For details, refer to the **WEB catalog** or Best Pneumatics No. 3.