



Table for standard stroke

	Tube I.D.	Stroke (mm)
Single acting	ø6	15,30,45,60
	ø10	15,30,45,60
	ø16	15,30,45,60,75,100,125,150
Double acting	ø6	15,30,45,60
	ø10	15,30,45,60,75,100,125,150
	ø16	15,30,45,60,75,100,125,150,175,200

Order example

MCMJ - 11 - 16 - 45M - B

MODEL

TUBE I.D.

STROKE

M: Magnet

1: Single rod
2: Double rod

STYLE

Code	Symbol	Description
1 1		Double acting / Male thread
1 3		Single acting / Normally extended male thread
1 5		Single acting / Normally returned male thread
2 1		Double rod / Male thread
2 7		Double rod / Adjustable male thread

END COVER TYPE

Code	Symbol	Tube I.D.
B		ø10,16
D		ø10,16
R		ø6,10,16

for tube I.D. ø10,16.

* Order example for special specification, refer to page 0-7.

* Order for 21, 27 type, please consult us.

Features

- High quality long service life.
- Cylinder mountings, available with a comprehensive range of accessories for rigid or flexible mounting.

Specification

Model	MCMJ		
Tube I.D. (mm)	ø6	ø10	ø16
Port size	M5×0.8		
Medium	Air		
Max. operating pressure	0.7 MPa		
Min. operating pressure (MPa)	Single acting normally extended	0.25	0.15
	Single acting normally returned	0.2	0.15
	Double acting	0.12	0.06
Proof pressure	1 MPa		
Lubrication	Not required		
Ambient temperature	-5~+60°C (No freezing)		
Available speed range	50~500 mm/sec		
Max. allowable kinetic energy (J)	0.16	0.27	0.4
Sensor switch (*)	RCM		
Sensor switch band	BM6	BM10	BM16

* RCM specification, please refer to page 8-13.

Tightening torque

Tube I.D.	Rod thread	Tightening torque (kgf-cm)
ø6	M3×0.5	4.79
ø10	M4×0.7	11.8
ø16	M5×0.8	22.8

* Make sure the tightening torque of rod thread does not exceed the value above.

* The tolerance of tightening torque is ±5%.

Mounting accessories

FA - MCMJ - 16

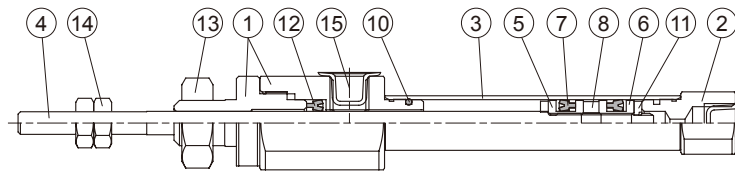
MODEL

TUBE I.D.

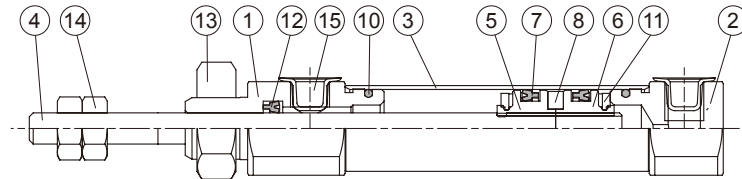
MOUNTING TYPE

	LB
	FA
	T
	Y
	I

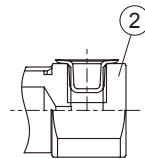
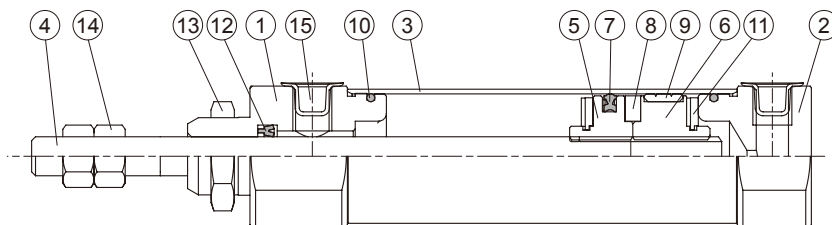
ø6



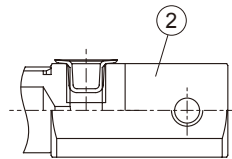
ø10



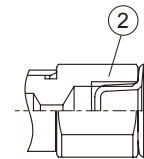
ø16



B type: ø10, ø16



D type: ø10, ø16



R type: ø6, ø10, ø16

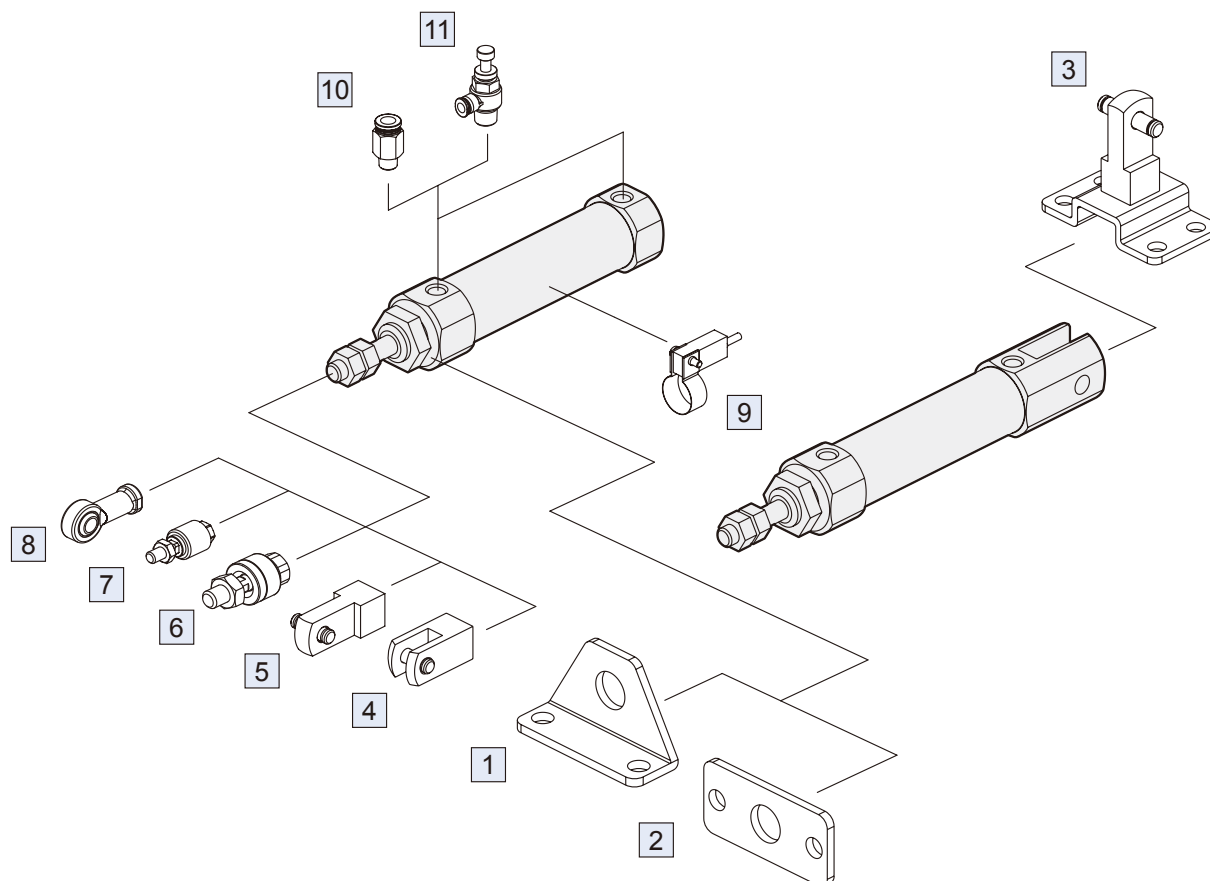
Material

No.	Tube I.D. Part name	6	10	16	Q'y	Component parts (inclusion)
1	Rod cover	Aluminum alloy			1	●
2	Head cover	Aluminum alloy			1	●
3	Tube	Stainless steel			1	
4	Piston rod	Stainless steel			1	
5	Piston-R	Aluminum alloy			1	●
6	Piston-H	Aluminum alloy			1	●
7	Piston packing	NBR			2 ^{*2}	●
8	Magnet ring	Magnet material			1	●
9	Wear ring	—		^{*1}	1	●
10	Cover ring	NBR			2	●
11	Cushion packing	NBR			2	●
12	Snap ring	NBR			1	●
13	Tie nut	Carbon steel			1	●
14	Rod front nut	Carbon steel			2	●
15	Port plug	Plastic			2	●

*1. Teflon+Graphite *2. Cylinder bore 6 (Required quantity: 1 pc)

Order example of Component parts

Tube I.D.	Component parts
ø6	CP-MCMJ-6-R
ø10	CP-MCMJ-10-R
	CP-MCMJ-10-B
	CP-MCMJ-10-D
ø16	CP-MCMJ-16-R
	CP-MCMJ-16-B
	CP-MCMJ-16-D

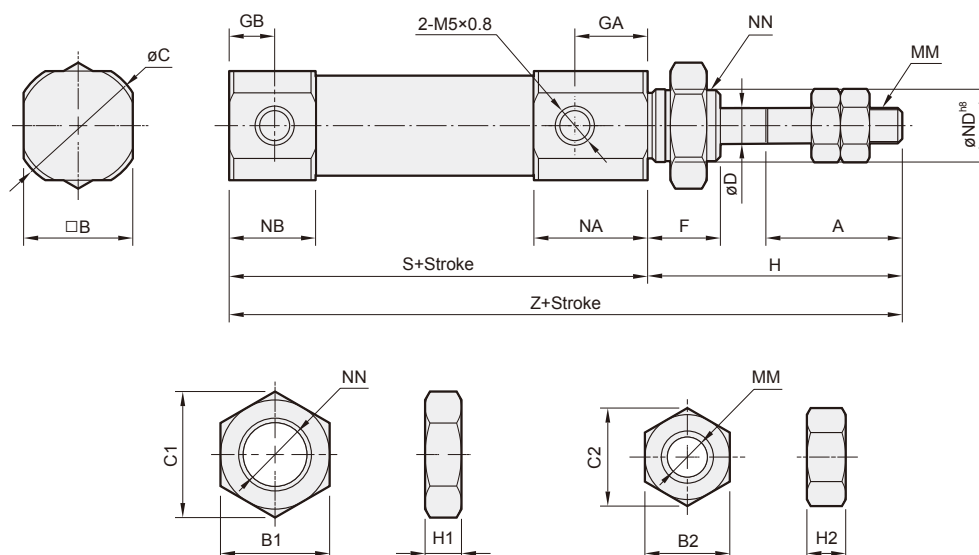


No.	Accessories	Page
1	Mounting accessories LB	3-56, 58, 60
2	Mounting accessories FA	3-57, 59, 61
3	Mounting accessories T+I+PIN (*)	3-57, 59, 61, 62
4	Accessories Y+PIN	3-62
5	Accessories I+PIN	3-62
6	Floating joint MFC	8-2

* Only for end cover "D" type.

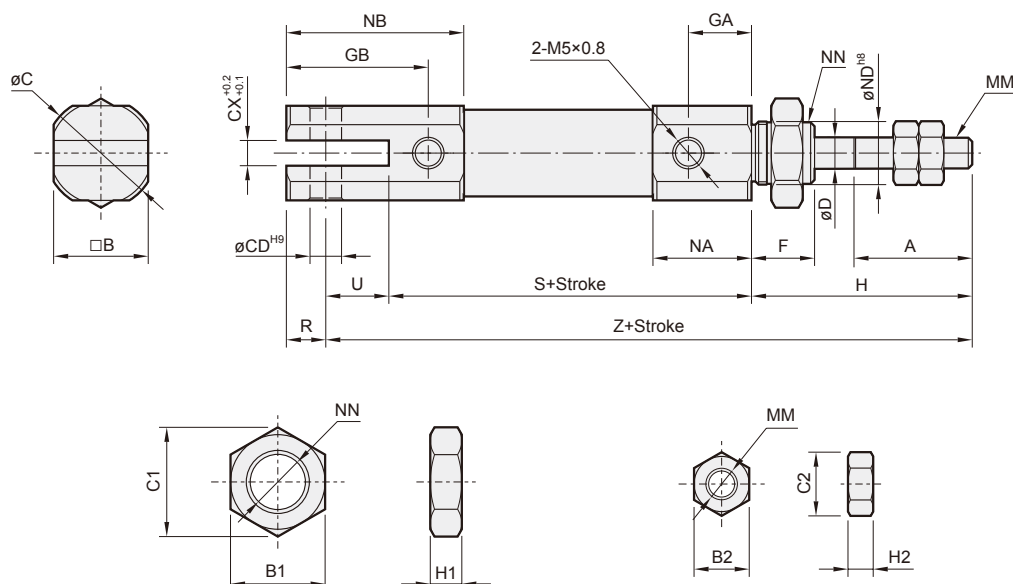
No.	Accessories	Page
7	Floating joint MFCS	8-4
8	Female rod ends PHS	8-5
9	Sensor switch RCM+BM**	8-13
10	Fitting PC (PISCO)	8-5 (Vol.1)
11	Speed controller JSC (PISCO)	8-18 (Vol.1)

B



Code Tube I.D.	A	B	B1	B2	C	C1	C2	D	F	GA	GB	H	H1	H2	MM	NA	NB	ND ^{h8}	NN	S	Z
10	15	12	11	7	14	11.5	8.1	4	8	8	5	28	4	3.2	M4x0.7	12.5	9.5	8 ^{0-0.022}	M8x1.0	46	74
16	15	18	14	8	20	16.2	9.2	5	8	8	5	28	4	4	M5x0.8	12.5	9.5	10 ^{0-0.022}	M10x1.0	47	75

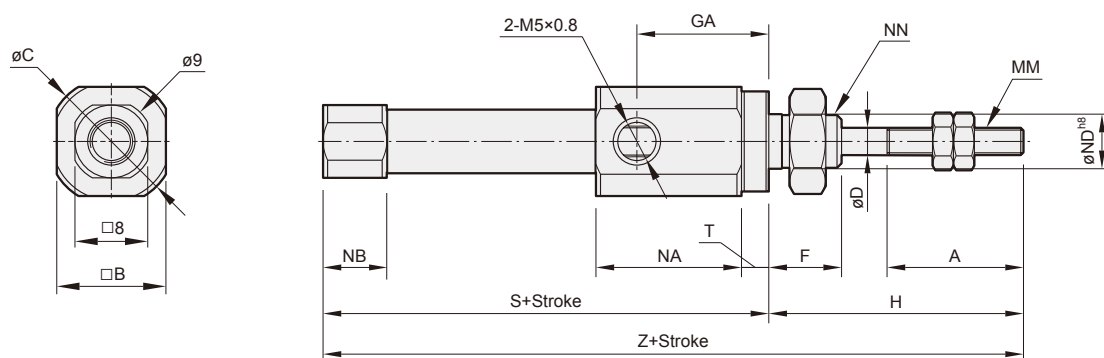
D



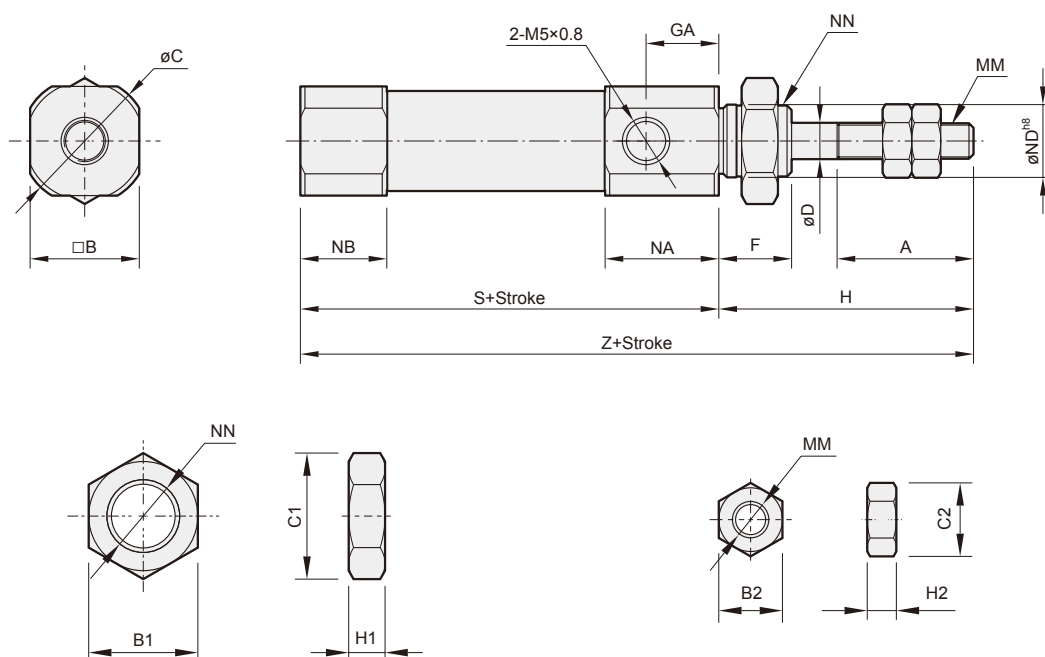
Code Tube I.D.	A	B	B1	B2	C	CD	CX	C1	C2	D	F	GA	GB	H	H1	H2	MM	NA	NB	ND ^{h8}	NN	R	S	U	Z
10	15	12	11	7	14	3.3	3.2	12.7	8.1	4	8	8	18	28	4	3.2	M4x0.7	12.5	22.5	8 ^{0-0.022}	M8x1.0	5	46	8	82
16	15	18	14	8	20	5	6.5	16.2	9.2	5	8	8	23	28	4	4	M5x0.8	12.5	27.5	10 ^{0-0.022}	M10x1.0	8	47	10	85

R

ø6



ø10~ø16



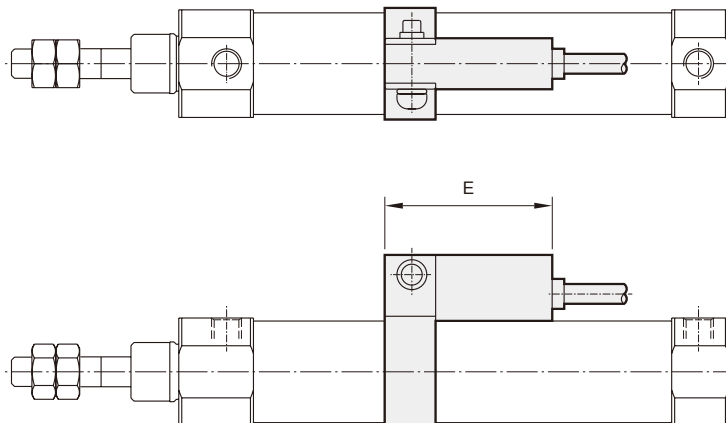
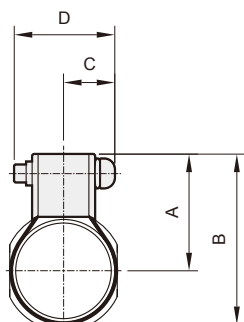
Code Tube I.D.	A	B	B1	B2	C	C1	C2	D	F	GA	H	H1	H2	MM	NA	NB	ND ^{h8}	NN	S	T	Z
6	15	12	8	5.5	14	9.2	6.4	3	8	14.5	28	4	2.4	M3×0.5	16	7	6 ⁰ _{-0.022}	M6×1.0	49	3	77
10	15	12	11	7	14	12.7	8.1	4	8	8	28	4	3.2	M4×0.7	12.5	9.5	8 ⁰ _{-0.022}	M8×1.0	46	—	74
16	15	18	14	8	20	16.2	9.2	5	8	8	28	4	4	M5×0.8	12.5	9.5	10 ⁰ _{-0.022}	M10×1.0	47	—	75

PEN CYLINDER

■ Installation of sensor switch

Sensor switch: RCM

Sensor switch band: BM**

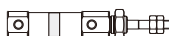


Code Tube I.D.	A	B	C	D	E
6	15	21	10	16	28
10	17	23	10	16	28
16	20	29	10	16	28

■ Cylinder & accessories weight

Cylinder weight

Unit: g

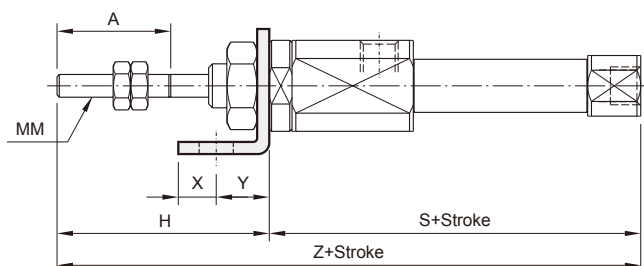
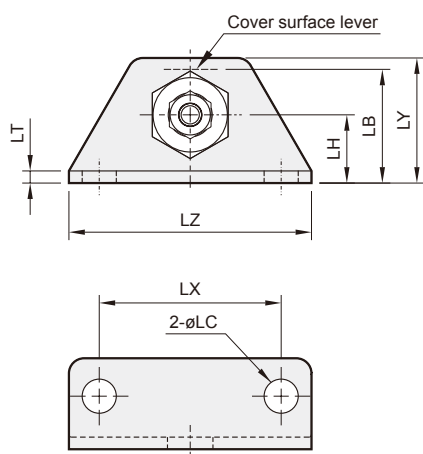
Model	Basic weight MCMJ-11-B	Stroke 15 mm MCMJ-11-B	Basic weight MCMJ-11-D	Stroke 15 mm MCMJ-11-D	Basic weight MCMJ-11-R	Stroke 15 mm MCMJ-11-R
Tube I.D.						
ø6	—	—	—	—	—	—
ø10	21	4	24	4	23	3
ø16	46	7	52	8	46	7

Accessories weight

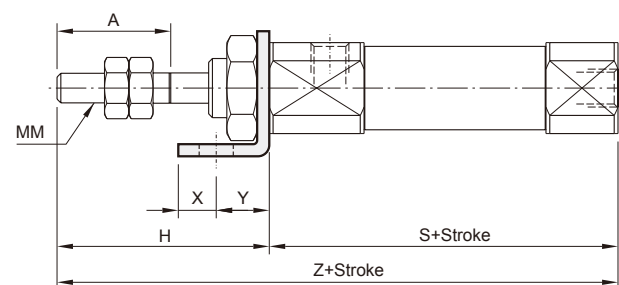
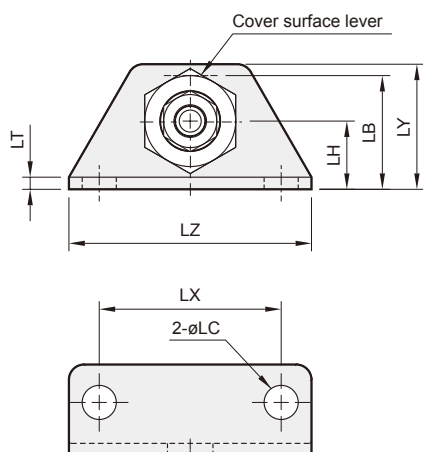
Model	LB	FA	T	Y	I	Pin
Tube I.D.						
ø6	129	63	—	—	—	—
ø10	129	63	—	—	—	—
ø16	207	162	54	17	21	—

LB

$\phi 6$



$\phi 10 \sim \phi 16$

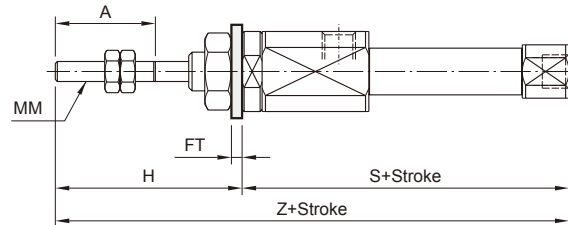
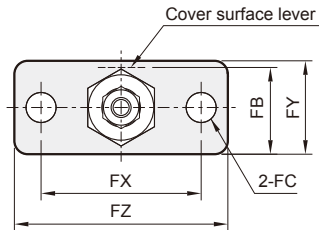


Code Tube I.D.	A	H	LB	LC	LH	LT	LX	LY	LZ	MM	S	X	Y	Z
6	15	28	15	4.5	9	1.6	24	16.5	32	M3×0.5	49	5	7	77
10	15	28	15	4.5	9	1.6	24	16.5	32	M4×0.7	46	5	7	74
16	15	28	23	5.5	14	2.3	33	25	42	M5×0.8	47	6	9	75

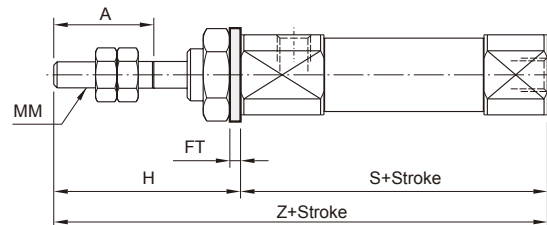
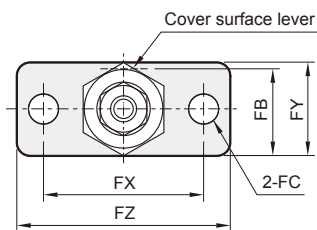
PEN CYLINDER

FA

ø6



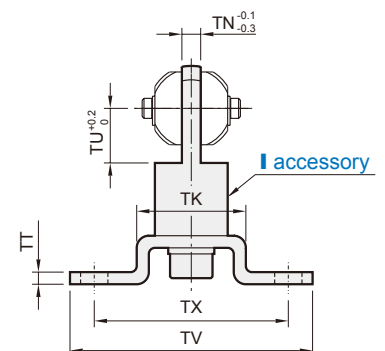
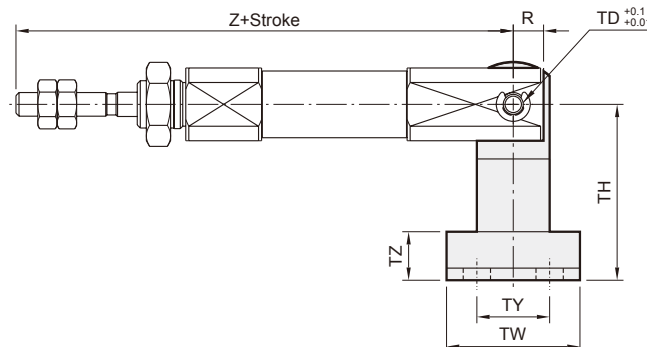
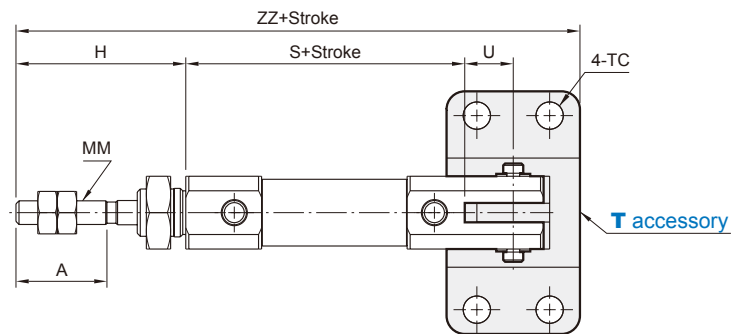
ø10~ø16



Code Tube I.D.	A	FB	FC	FT	FX	FY	FZ	H	MM	S	Z
6	15	13	4.5	1.6	24	14	32	28	M3×0.5	49	77
10	15	13	4.5	1.6	24	14	32	28	M4×0.7	46	74
16	15	19	5.5	2.3	33	20	42	28	M5×0.8	47	75

T

I+Pin
(Extra pruchase)

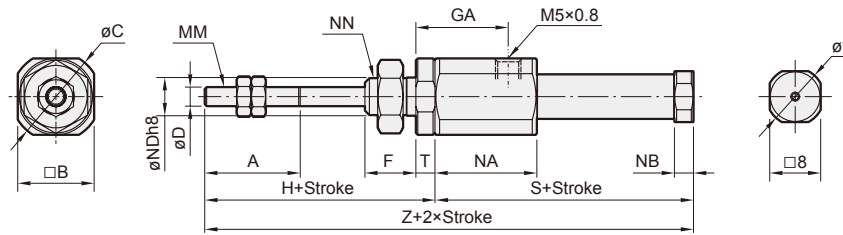


Code Tube I.D.	A	H	MM	R	S	TC	TD	TH	TK	TN	TT	TU	TV	TW	TX	TY	TZ	U	Z	ZZ
10	15	28	M4×0.7	5	46	4.5	3.3	29	18	3.1	2	9	40	22	32	12	8	8	8	93
16	15	28	M5×0.8	8	47	5.5	5	35	20	6.4	2.3	14	48	28	38	16	10	10	10	99

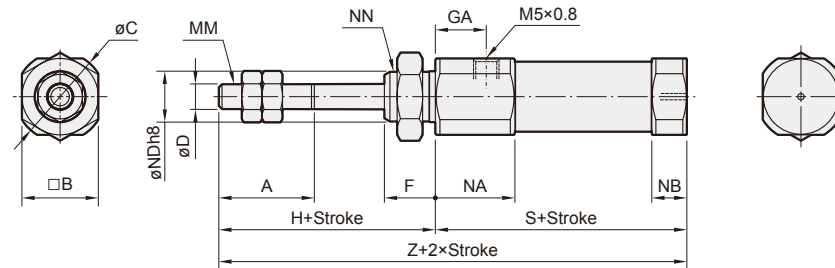
PEN CYLINDER

13

ø6



ø10, ø16



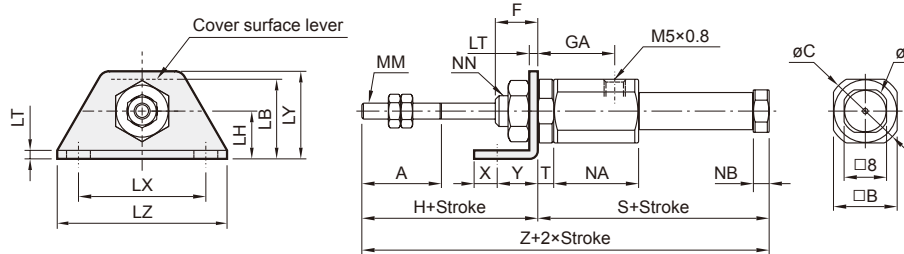
Code Tube I.D.	A	B	C	D	F	GA	H	MM	NA	NB	ND	NN	T
6	15	12	14	3	8	14.5	28	M3x0.5	16	3	6 ⁰ _{-0.018}	M6x1.0	3
10	15	12	14	4	8	8	28	M4x0.7	12.5	5.5	8 ⁰ _{-0.022}	M8x1.0	—
16	15	18	20	5	8	8	28	M5x0.8	12.5	5.5	10 ⁰ _{-0.022}	M10x1.0	—

* (S), (Z) () indicate the size of that with magnet ring.

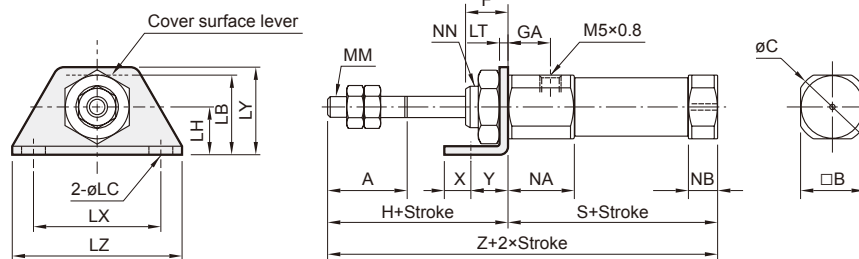
Code Stroke Tube I.D.	S *								Z *							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	46.5 (51.5)	55.5 (60.5)	59.5 (64.5)	73.5 (78.5)	—	—	—	—	74.5 (79.5)	83.5 (88.5)	87.5 (92.5)	101.5 (106.5)	—	—	—	—
10	48.5	56	68	80	—	—	—	—	76.5	84	96	108	—	—	—	—
16	48.5	57	69	81	87	111	129	141	76.5	85	97	109	115	139	157	169

LB

ø6



ø10, ø16



Code Tube I.D.	A	B	C	D	F	GA	H	LB	LC	LH	LT	LX	LY	LZ	MM	NA	NB	NN	T	X	Y
6	15	12	14	3	8	14.5	28	15	4.5	9	1.6	24	16.5	32	M3x0.5	16	3	M6x1.0	3	5	7
10	15	12	14	4	8	8	28	15	4.5	9	1.6	24	16.5	32	M4x0.7	12.5	5.5	M8x1.0	—	5	7
16	15	18	20	5	8	8	28	23	5.5	14	2.3	33	25	42	M5x0.8	12.5	5.5	M10x1.0	—	6	9

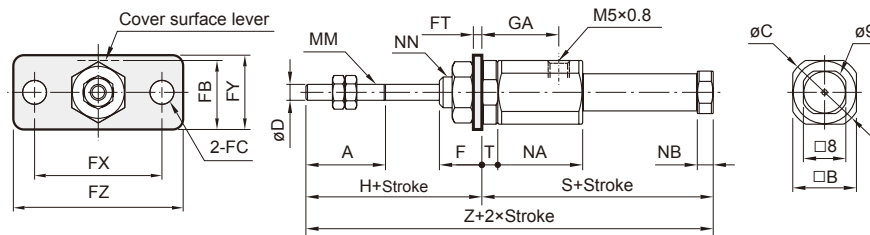
Code Stroke Tube I.D.	S *								Z *							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	46.5 (51.5)	55.5 (60.5)	59.5 (64.5)	73.5 (78.5)	—	—	—	—	74.5 (79.5)	83.5 (88.5)	87.5 (92.5)	101.5 (106.5)	—	—	—	—
10	48.5	56	68	80	—	—	—	—	76.5	84	96	108	—	—	—	—
16	48.5	57	69	81	87	111	129	141	76.5	85	97	109	115	139	157	169

* (S), (Z) () indicate the size of that with magnet ring.

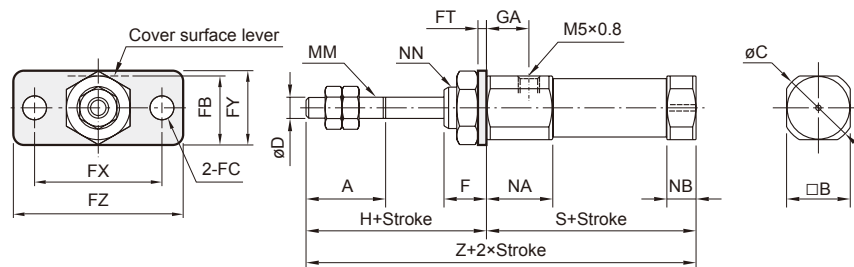
PEN CYLINDER

FA

ø6



ø10~ø16



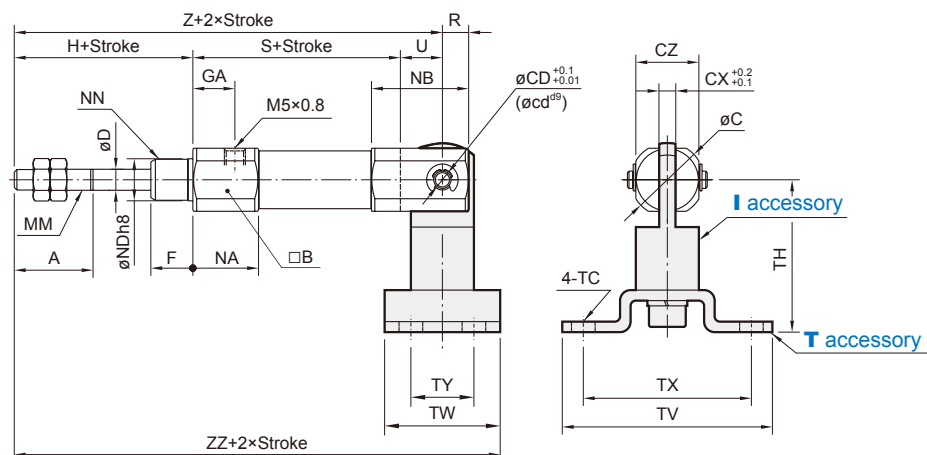
Code Tube I.D.	A	B	C	D	F	GA	H	FB	FC	FT	FX	FY	FZ	MM	NA	NB	NN	T	X	Y
6	15	12	14	3	8	14.5	28	11	4.5	1.6	24	14	32	M3×0.5	16	3	M6×1.0	3	5	7
10	15	12	14	4	8	8	28	13	4.5	1.6	24	14	32	M4×0.7	12.5	5.5	M8×1.0	—	5	7
16	15	18	20	5	8	8	28	19	5.5	2.3	33	20	42	M5×0.8	12.5	5.5	M10×1.0	—	6	9

Code Stroke Tube I.D.	S *								Z *							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	46.5 (51.5)	55.5 (60.5)	59.5 (64.5)	73.5 (78.5)	—	—	—	—	74.5 (79.5)	83.5 (88.5)	87.5 (92.5)	101.5 (106.5)	—	—	—	—
10	48.5	56	68	80	—	—	—	—	76.5	84	96	108	—	—	—	—
16	48.5	57	69	81	87	111	129	141	76.5	85	97	109	115	139	157	169

* (S), (Z) () indicate the size of that with magnet ring.

T

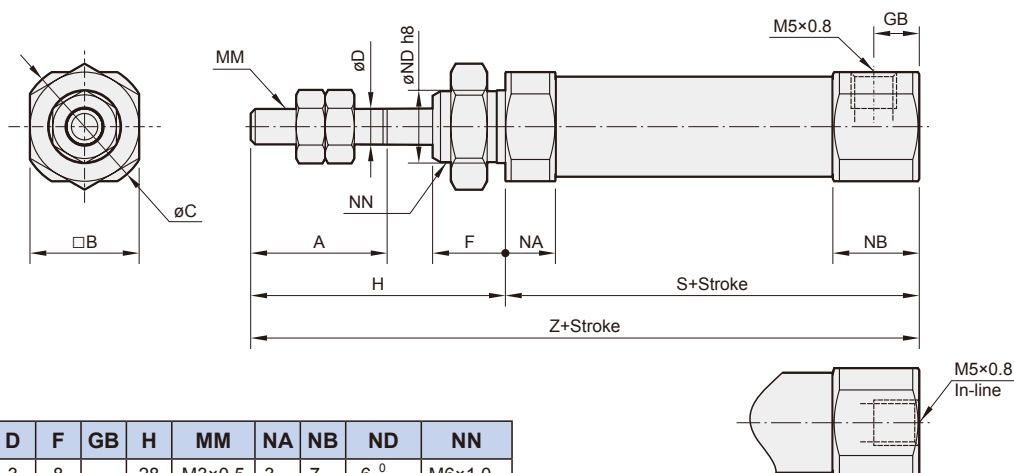
I+Pin
(Extra purchase)



Code Tube I.D.	A	B	C	CD (cd)	CX	CZ	D	F	GA	H	MM	NA	NB	ND	NN	R	TC	TH	TV	TW	TX	TY	U
10	15	12	14	3.3	3.2	12	4	8	8	28	M4×0.7	12.5	18.5	8 ⁰ _{-0.022}	M8×1.0	5	4.5	29	40	22	32	12	8
16	15	18	20	5	6.5	18	5	8	8	28	M5×0.8	12.5	23.5	10 ⁰ _{-0.022}	M10×1.0	8	5.5	35	48	28	38	16	10

Code Stroke Tube I.D.	S								Z								ZZ							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
10	48.5	56	68	80	—	—	—	—	84.5	92	104	116	—	—	—	—	95.5	103	115	127	—	—	—	—
16	48.5	57	69	81	87	111	129	141	86.5	95	107	119	125	149	167	179	100.5	109	121	133	139	163	181	193

15

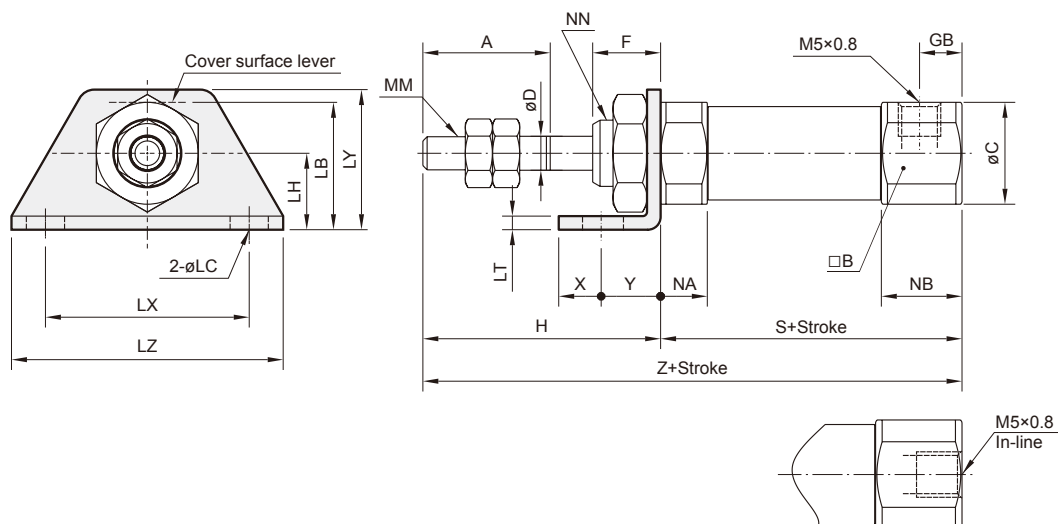


Code Tube I.D.	A	B	C	D	F	GB	H	MM	NA	NB	ND	NN
6	15	8	9	3	8	—	28	M3×0.5	3	7	6 ⁰ _{-0.018}	M6×1.0
10	15	12	14	4	8	5	28	M4×0.7	5.5	9.5	8 ⁰ _{-0.022}	M8×1.0
16	15	18	20	5	8	5	28	M5×0.8	5.5	9.5	10 ⁰ _{-0.022}	M10×1.0

Code Stroke Tube I.D.	S *								Z *							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	34.5 (39.5)	43.5 (48.5)	47.5 (52.5)	61.5 (66.5)	—	—	—	—	62.5 (67.5)	71.5 (76.5)	75.5 (80.5)	89.5 (94.5)	—	—	—	—
10	45.5	53	65	77	—	—	—	—	73.5	81	93	105	—	—	—	—
16	45.5	54	66	78	84	108	126	138	73.5	82	94	106	112	136	154	166

* (S), (Z) () indicate the size of that with magnet ring.

LB



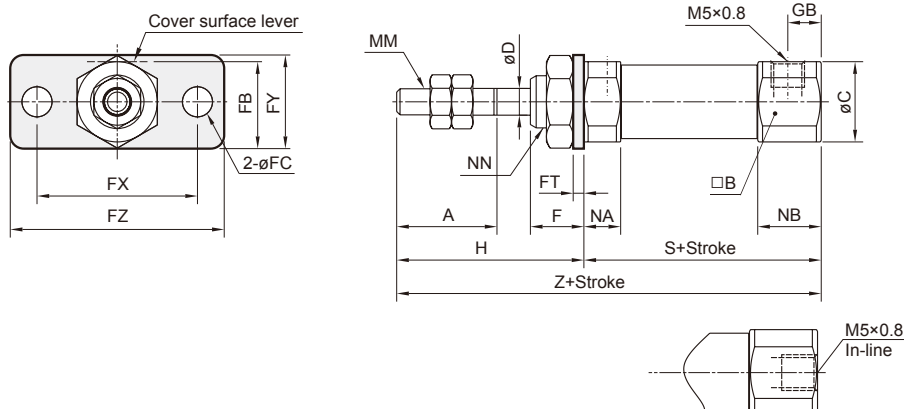
Code Tube I.D.	A	B	C	D	F	GB	H	LB	LC	LH	LT	LX	LY	LZ	MM	NA	NB	NN	X	Y
6	15	8	9	3	8	—	28	13	4.5	9	1.6	24	16.5	32	M3×0.5	3	7	M6×1.0	5	7
10	15	12	14	4	8	5	28	15	4.5	9	1.6	24	16.5	32	M4×0.7	5.5	9.5	M8×1.0	5	7
16	15	18	20	5	8	5	28	23	5.5	14	2.3	33	25	42	M5×0.8	5.5	9.5	M10×1.0	6	9

Code Stroke Tube I.D.	S *								Z *							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	34.5 (39.5)	43.5 (48.5)	47.5 (52.5)	61.5 (66.5)	—	—	—	—	62.5 (67.5)	71.5 (76.5)	75.5 (80.5)	89.5 (94.5)	—	—	—	—
10	45.5	53	65	77	—	—	—	—	73.5	81	93	105	—	—	—	—
16	45.5	54	66	78	84	108	126	138	73.5	82	94	106	112	136	154	166

* (S), (Z) () indicate the size of that with magnet ring.

PEN CYLINDER

FA



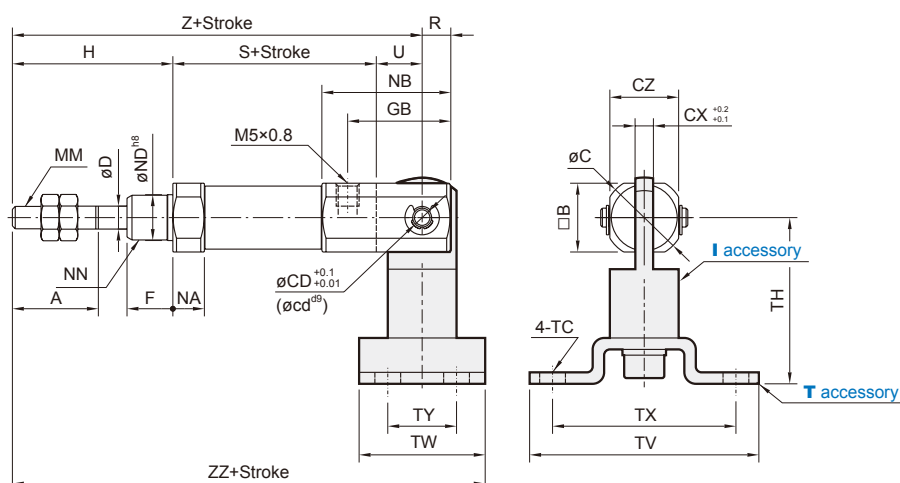
Code Tube I.D.	A	B	C	D	F	GB	H	FB	FC	FT	FX	FY	FZ	MM	NA	NB	NN	X	Y
6	15	8	9	3	8	—	28	11	4.5	1.6	24	14	32	M3×0.5	3	7	M6×1.0	5	7
10	15	12	14	4	8	5	28	13	4.5	1.6	24	14	32	M4×0.7	5.5	9.5	M8×1.0	5	7
16	15	18	20	5	8	5	28	19	5.5	2.3	33	20	42	M5×0.8	5.5	9.5	M10×1.0	6	9

Code Stroke Tube I.D.	S *								Z *							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	34.5 (39.5)	43.5 (48.5)	47.5 (52.5)	61.5 (66.5)	—	—	—	—	62.5 (67.5)	71.5 (76.5)	75.5 (80.5)	89.5 (94.5)	—	—	—	—
10	45.5	53	65	77	—	—	—	—	73.5	81	93	105	—	—	—	—
16	45.5	54	66	78	84	108	126	138	73.5	82	94	106	112	136	154	166

* (S), (Z) () indicate the size of that with magnet ring.

T

I+Pin
(Extra purchase)

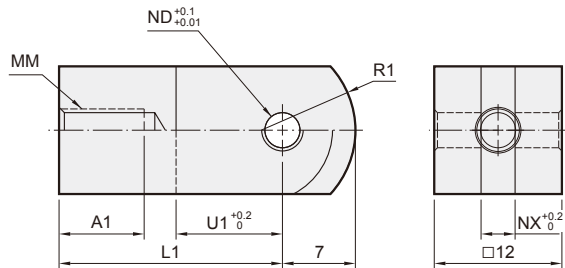


Code Stroke Tube I.D.	A	B	C	CD (cd)	CX	CZ	D	F	GB	H	MM	NA	NB	ND	NN	R	TC	TH	TV	TW	TX	TY	U
10	15	12	14	3.3	3.2	12	4	8	18	28	M4×0.7	5.5	22.5	8 ⁰ _{-0.022}	M8×1.0	5	4.5	29	40	22	32	12	8
16	15	18	20	5	6.5	18	5	8	23	28	M5×0.8	5.5	27.5	10 ⁰ _{-0.022}	M10×1.0	8	5.5	35	48	28	38	16	10

Code Stroke Tube I.D.	S								Z								ZZ							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
10	45.5	53	65	77	—	—	—	—	81.5	89	101	113	—	—	—	—	92.5	100	112	124	—	—	—	—
16	45.5	54	66	78	84	108	126	138	83.5	92	104	116	122	146	164	176	97.5	106	118	130	136	160	178	190

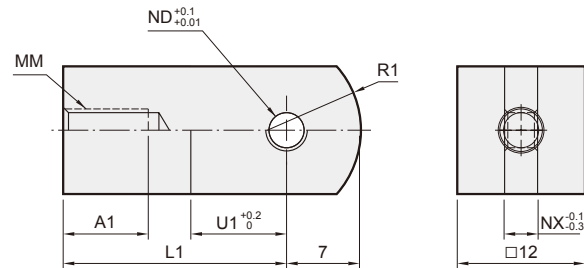
PEN CYLINDER

Y connector



Code Tube I.D.	A1	L1	MM	ND	NX	R1	U1
10	8	21	M4×0.7	3.3	3.2	8	10
16	11	21	M5×0.8	5	6.5	12	10

I connector

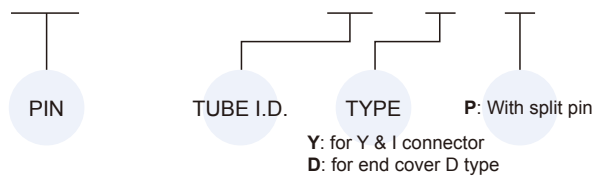


Code Tube I.D.	A1	L1	MM	ND	NX	R1	U1
10	8	21	M4×0.7	3.3	3.1	8	9
16	8	25	M5×0.8	5	6.4	12	14

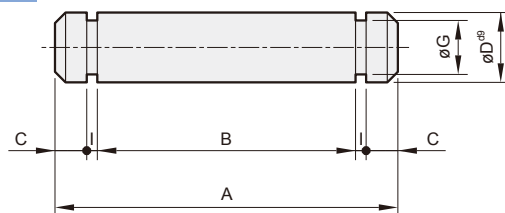
PIN

Order example

PIN — MCMJ — 10 — Y — P



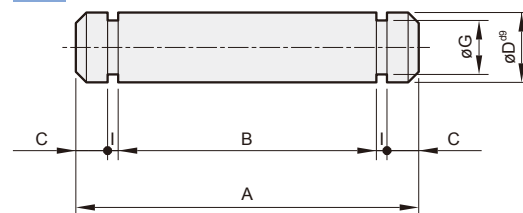
P



for Y & I connector

Code Tube I.D.	A	B	C	D ^{d9}	G	I	Split pin
10	16.2	12.2	1.5	3.3 ^{-0.03/-0.06}	2.5	0.5	E-2.5
16	16.2	12.2	1.5	5 ^{-0.03/-0.06}	4	0.7	E-4

P



for end cover D type

Code Tube I.D.	A	B	C	D ^{d9}	G	I	Split pin
10	15.2	12.2	1	3.3 ^{-0.03/-0.06}	2.5	0.5	E-2.5
16	22.7	18.3	1.5	5 ^{-0.03/-0.06}	4	0.7	E-4