



### Features

- Special housing and bushing enables self lubrication of piston rod.
- 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)		φ 6	φ 10	φ 16
Port size		M5×0.8		
Medium		Air		
Max operation pressure		0.7 MPa		
Min operation pressure (MPa)	Single acting	normally extended	0.25	0.15
		normally returned	0.2	0.15
	Double acting	0.12	0.06	
Proof pressure		1 MPa		
Ambient temperature		-5~+60°C (No freezing)		
Available speed range		50~500mm/sec		
Lubrication		Not required		
Sensor switch (※)		RCS		RCM,RCS
Sensor switch band		BJ6	BJ10	BJ16
		—	—	BM16

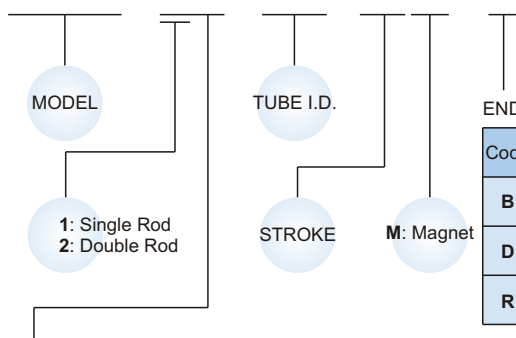
### Table for standard stroke

	Tube I.D.	Stroke (mm)
Single acting	φ 6	15,30,45,60
	φ 10	15,30,45,60
	φ 16	15,30,45,60,75,100,125,150
Double acting	φ 6	15,30,45,60
	φ 10	15,30,45,60,75,100,125,150
	φ 16	15,30,45,60,75,100,125,150,175,200

※ RCM, RCS specification, please refer to page V-11, V-12.  
 ※ Sensor switch band BM\*\* only for RCM.

### Order example

**MCMJ-11-16-45M-B**



Code	Symbol	Tube I.D.
B		φ 10,16
D		φ 10,16
R		φ 6,10,16

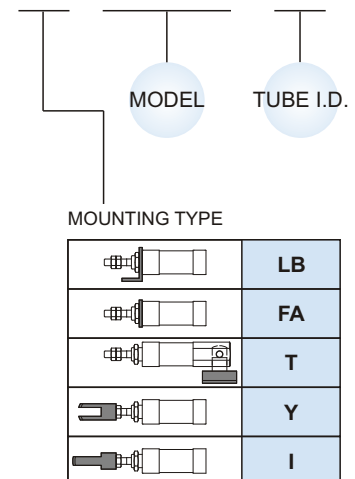
### STYLE:

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

for tube I.D. φ 10,16

### Mounting accessories

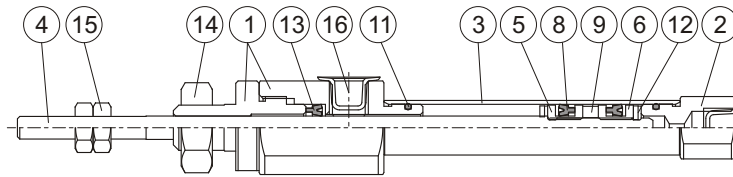
**FA-MCMJ-16**



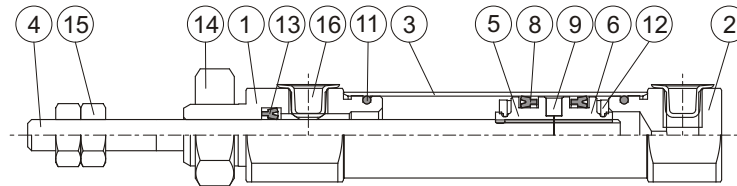
※ Order example for special specification, refer to page J-03.

## PEN CYLINDERS

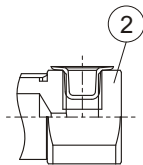
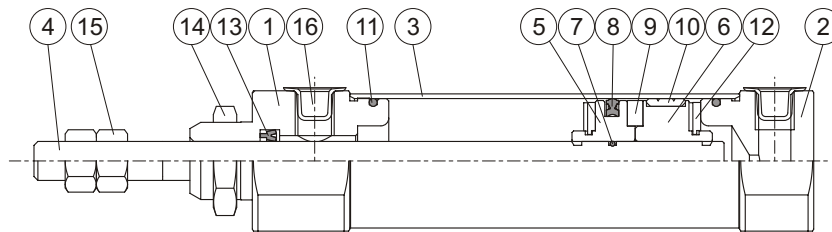
$\phi 6$



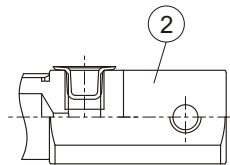
$\phi 10$



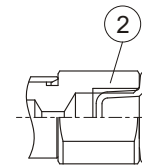
$\phi 16$



B type:  $\phi 10, \phi 16$



D type:  $\phi 10, \phi 16$



R type:  $\phi 6, \phi 10, \phi 16$

### Material

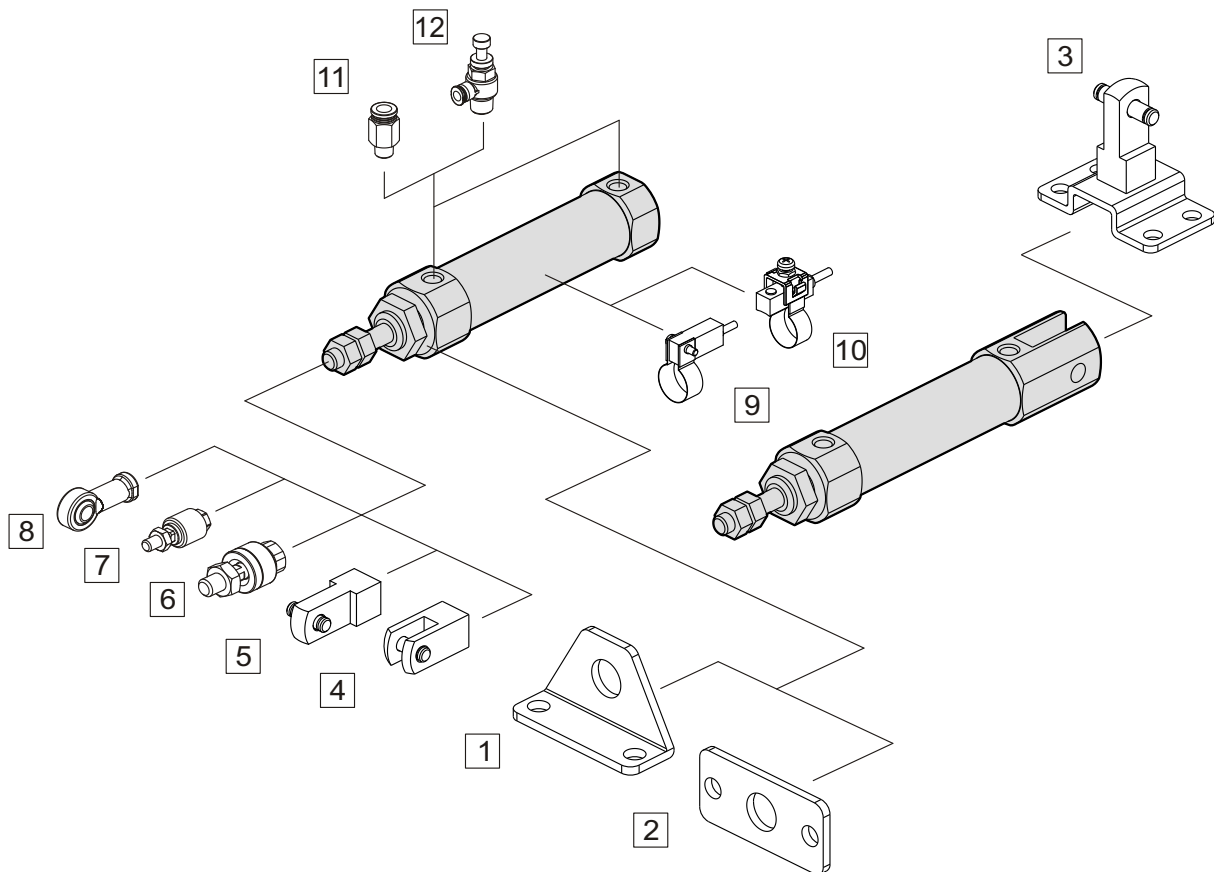
No.	Part name	Tube I.D.			Q'y	Componentn parts (inclusion)
		6	10	16		
1	Rod cover	Aluminum alloy			1	●
2	Head cover	Aluminum alloy			1	●
3	Tube	Stainless steel			1	
4	Piston rod	Stainless steel			1	
5	Piston-R	Aluminum alloy			1	●
6	Piston-H	Aluminum alloy			1	●
7	Piston gasket	—	NBR		1	●
8	Piston packing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

※ Cylinder bore 16 (Required quantity : 1 psc)

※1. Teflon + Graphite

### Order example of component parts

Tube I.D.	Component parts
$\phi 6$	CP-MCMJ-6-R
$\phi 10$	CP-MCMJ-10-R
	CP-MCMJ-10-B
	CP-MCMJ-10-D
$\phi 16$	CP-MCMJ-16-R
	CP-MCMJ-16-B
	CP-MCMJ-16-D



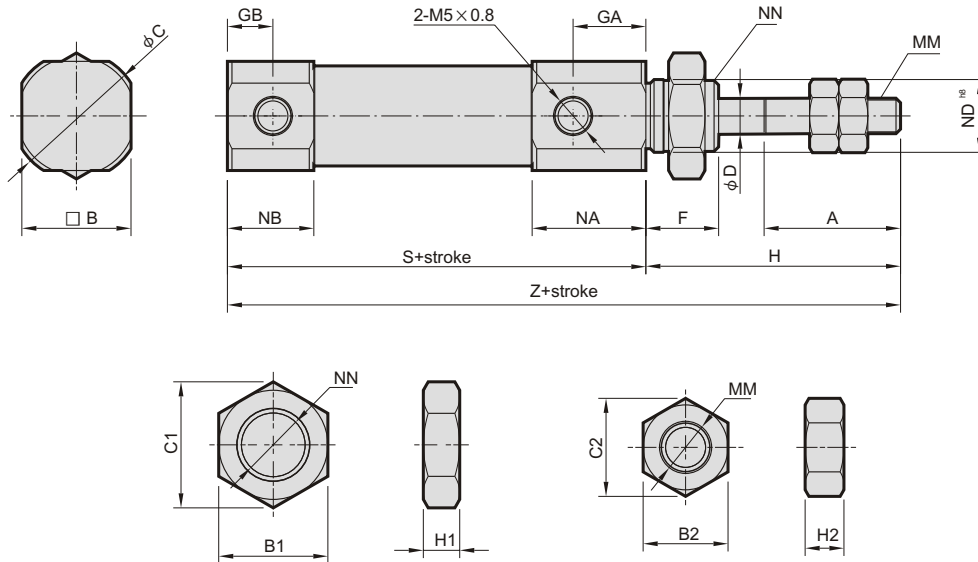
No.	Accessories	Page
1	Mounting accessories LB	L-51,53,55
2	Mounting accessories FA	L-52,54,56
3	Mounting accessories T+I+PIN (※)	L-52,54,56
4	Accessories Y+PIN	L-57
5	Accessories I+PIN	L-57
6	Floating joint MFC	V-01
7	Floating joint MFCS	V-03
8	Female rod ends PHS	V-04

No.	Accessories	Page
9	Sensor switch RCM+BM**	V-11
10	Sensor switch RCS+BJ**	V-12
11	Fitting PC (PISCO)	H-03
12	Speed controller JSC (PISCO)	H-14

※ Only for end cover "D" type

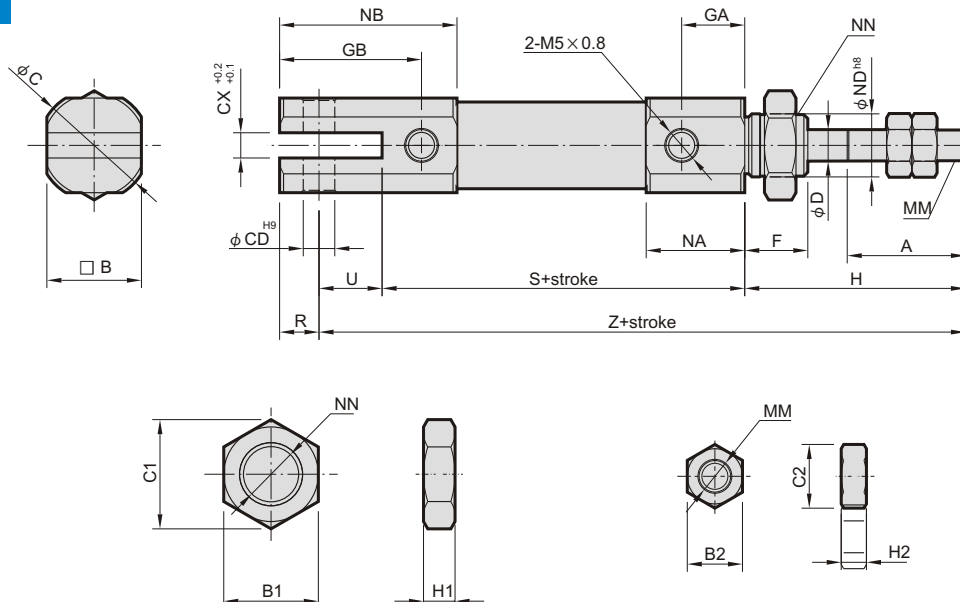
PEN CYLINDERS

**B**



Code Tube I.D.	A	B	B1	B2	C	C1	C2	D	F	GA	GB	H	H1	H2	MM	NA	NB	ND <sup>h8</sup>	NN	S	Z
10	15	12	11	7	14	11.5	8.1	4	8	8	5	28	4	3.2	M4×0.7	12.5	9.5	8 <sup>0</sup> <sub>-0.022</sub>	M8×1.0	46	74
16	15	18	14	8	20	16.2	9.2	5	8	8	5	28	4	4	M5×0.8	12.5	9.5	10 <sup>0</sup> <sub>-0.022</sub>	M10×1.0	47	75

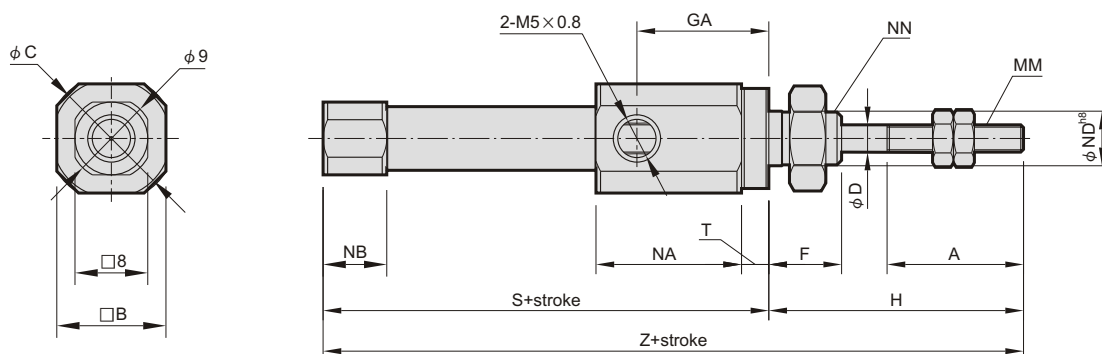
**D**



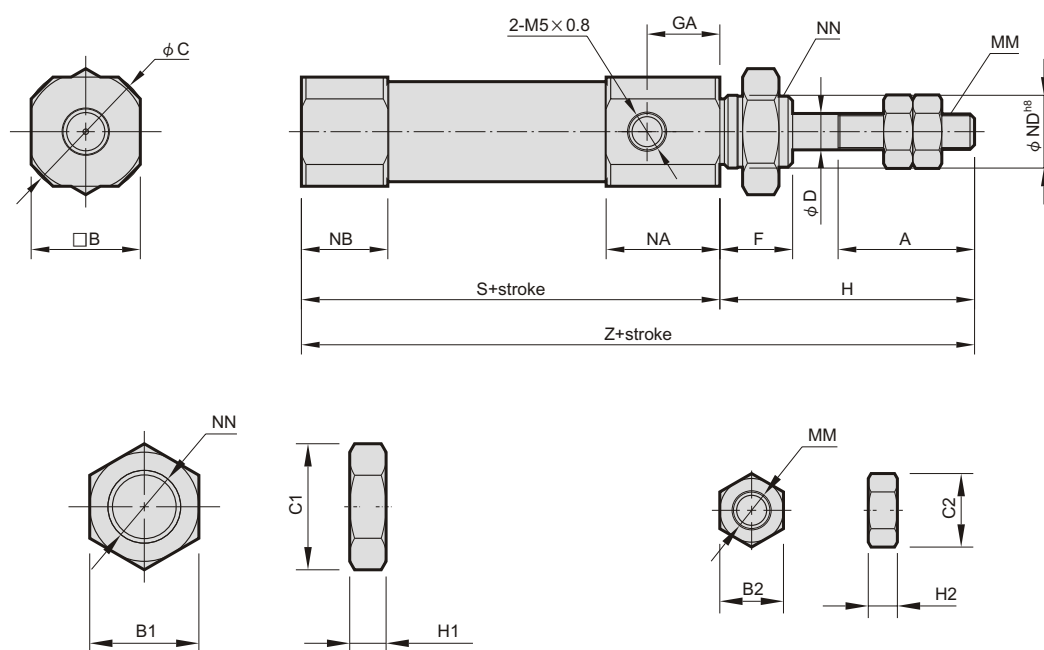
Code Tube I.D.	A	B	B1	B2	C	CD	CX	C1	C2	D	F	GA	GB	H	H1	H2	MM	NA	NB	ND <sup>h8</sup>	NN	R	S	U	Z
10	15	12	11	7	14	3.3	3.2	12.7	8.1	4	8	8	18	28	4	3.2	M4×0.7	12.5	22.5	8 <sup>0</sup> <sub>-0.022</sub>	M8×1.0	5	46	8	82
16	15	18	14	8	20	5	6.5	16.2	9.2	5	8	8	23	28	4	4	M5×0.8	12.5	27.5	10 <sup>0</sup> <sub>-0.022</sub>	M10×1.0	8	47	10	85

### R

#### MCMJ-6



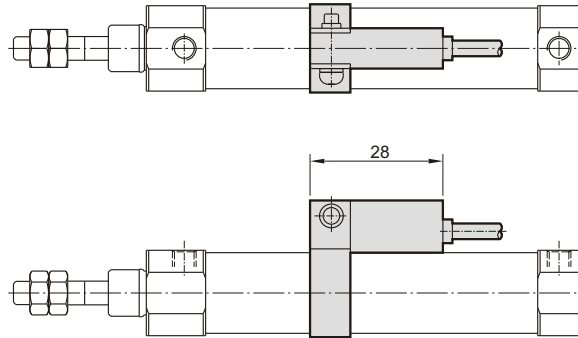
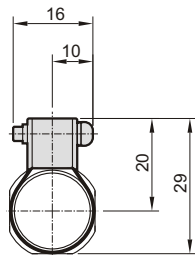
#### MCMJ-10 / MCMJ-16



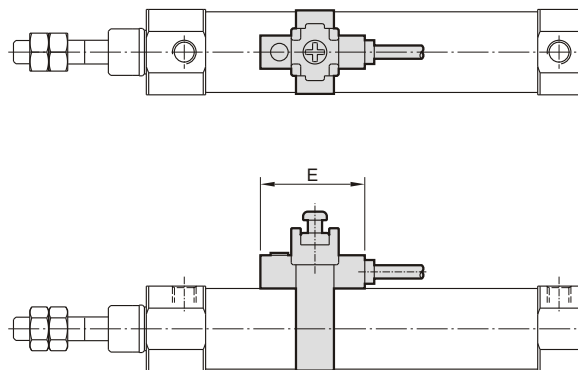
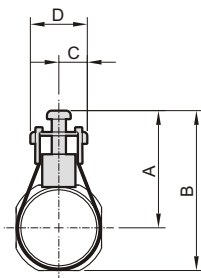
Code Tube I.D.	A	B	B1	B2	C	C1	C2	D	F	GA	H	H1	H2	MM	NA	NB	ND <sup>h8</sup>	NN	S	T	Z
6	15	12	8	5.5	14	9.2	6.4	3	8	14.5	28	4	2.4	M3×0.5	16	7	6 <sup>0</sup> <sub>-0.022</sub>	M6×1.0	49	3	77
10	15	12	11	7	14	12.7	8.1	4	8	8	28	4	3.2	M4×0.7	12.5	9.5	8 <sup>0</sup> <sub>-0.022</sub>	M8×1.0	46	/	74
16	15	18	14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

**PEN CYLINDERS**

Sensor switch: RCM  
Sensor switch band: BM\*\*



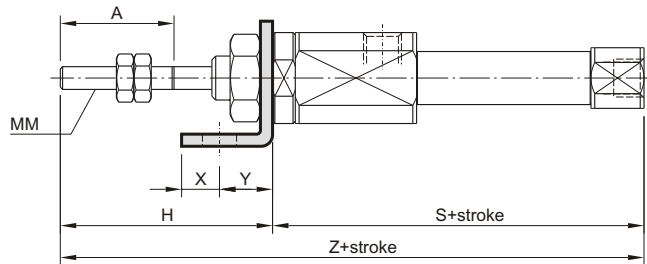
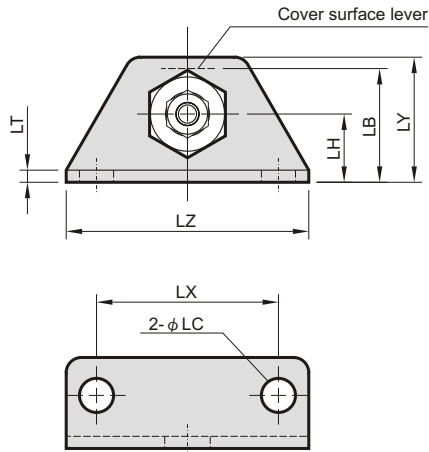
Sensor switch: RCS  
Sensor switch band: BJ\*\*



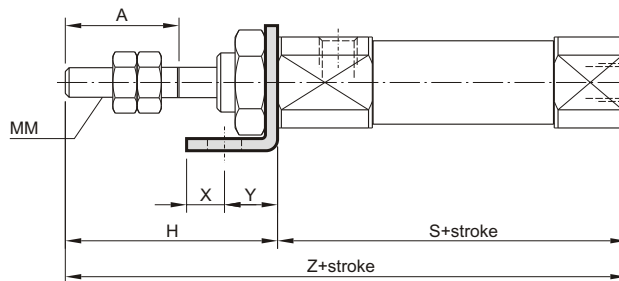
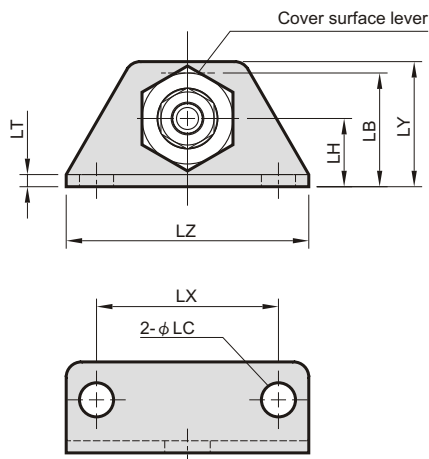
Code Tube I.D.	A	B	C	D	E
6	18.1	24.1	6	12	22
10	20.1	26.1	6	12	22
16	23.4	32.4	6	12	22

**LB**

**MCMJ- $\phi 6$ -LB**



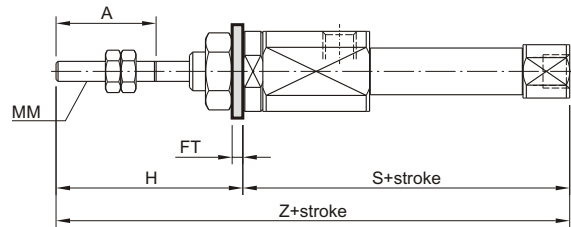
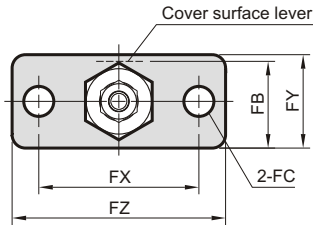
**MCMJ- $\phi 10, \phi 16$ -LB**



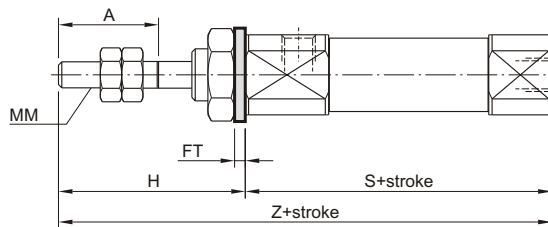
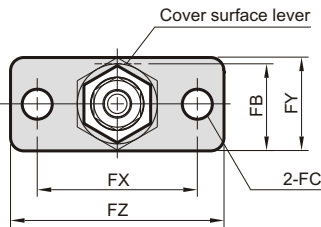
Code Tube I.D.	A	H	LB	LC	LH	LT	LX	LY	LZ	MM	S	X	Y	Z
6	15	28	15	4.5	9	1.6	24	16.5	32	M3×0.5	49	5	7	77
10	15	28	15	4.5	9	1.6	24	16.5	32	M4×0.7	46	5	7	74
16	15	28	23	5.5	14	2.3	33	25	42	M5×0.8	47	6	9	75

**FA**

$\phi 6$



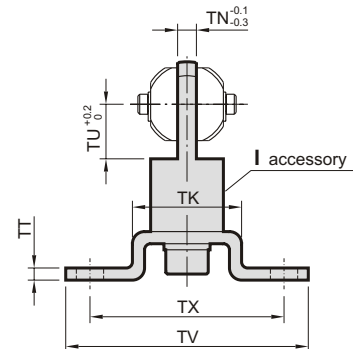
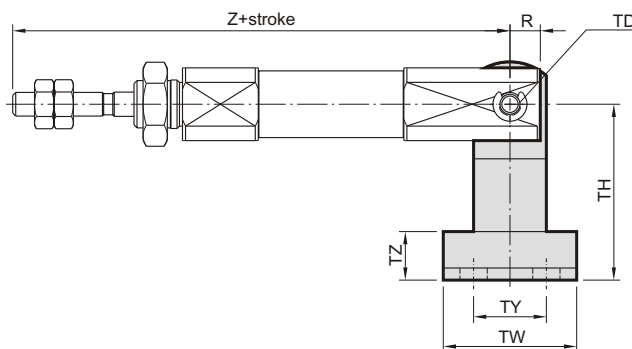
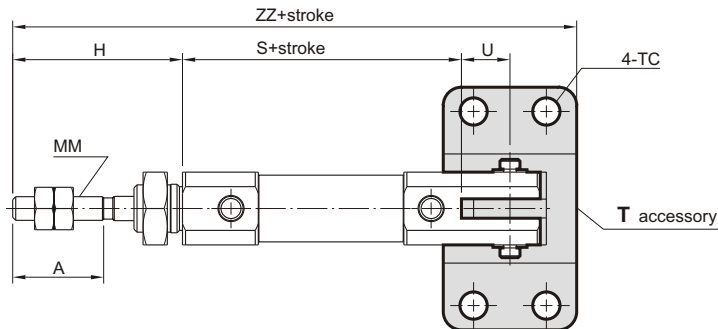
$\phi 10 \sim \phi 16$



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**

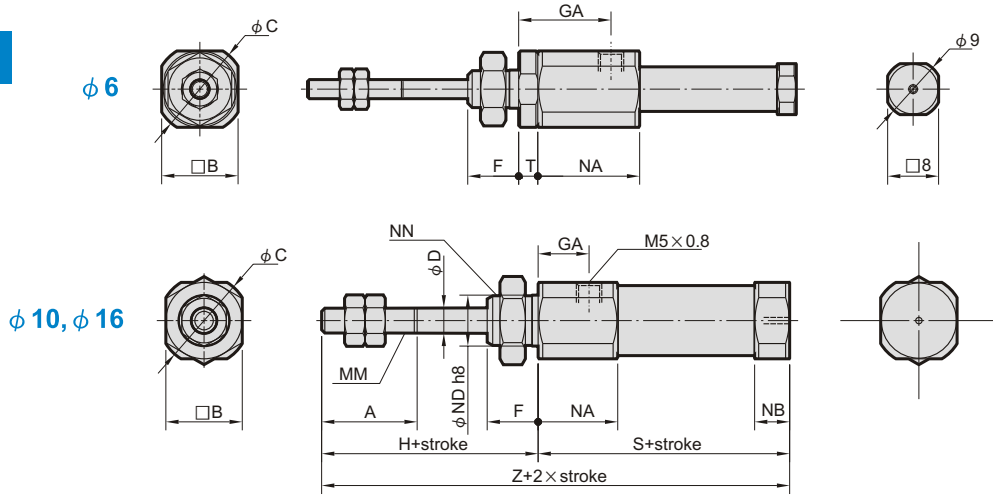
I + Pin  
(Extra purchase)



Code Tube I.D.	A	H	MM	R	S	TC	TD <sup>H10</sup>	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 <sup>+0.048</sup> / <sub>0</sub>	29	18	3.1	2	9	40	22	32	12	8	8	8	93
16	15	28	M5×0.8	8	47	4.5	5 <sup>+0.048</sup> / <sub>0</sub>	35	20	6.4	2.3	14	48	28	38	16	10	10	10	99



### 13

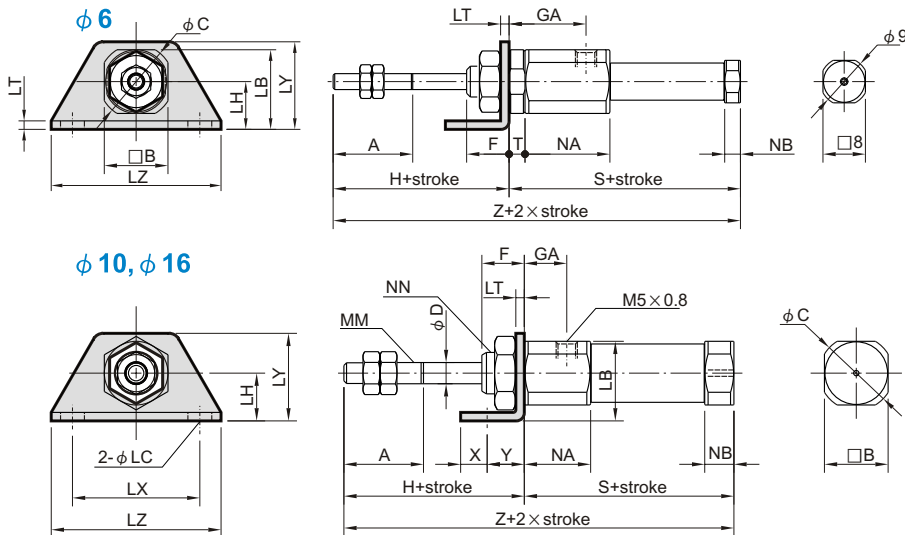


Code Tube I.D.	A	B	C	D	F	GA	H	MM	NA	NB	ND	NN	T
6	15	12	14	3	8	14.5	28	M3×0.5	16	3	6 <sup>0</sup> <sub>-0.018</sub>	M6×1.0	3
10	15	12	14	4	8	8	28	M4×0.7	12.5	5.5	8 <sup>0</sup> <sub>-0.022</sub>	M8×1.0	-
16	15	18	20	5	8	8	28	M5×0.8	12.5	5.5	10 <sup>0</sup> <sub>-0.022</sub>	M10×1.0	-

Code Stroke 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

### LB



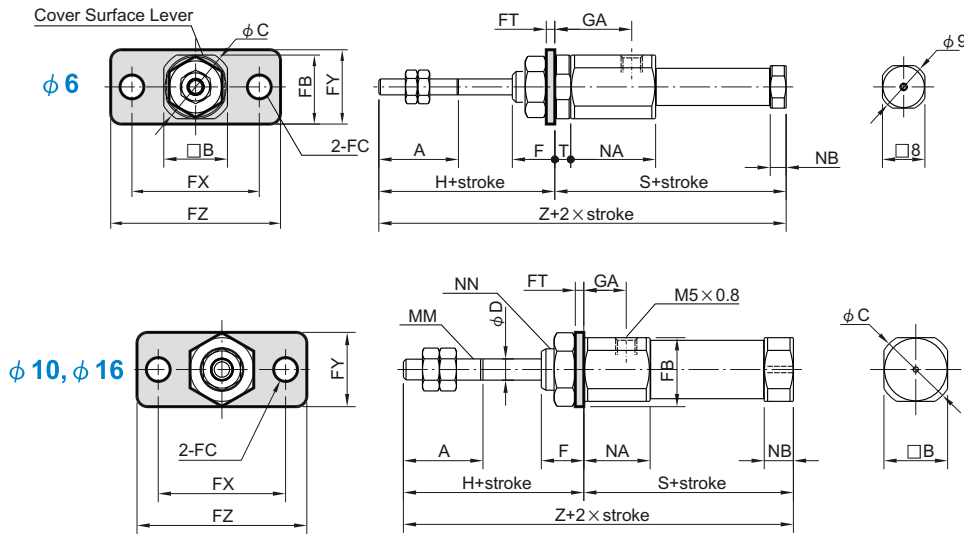
Code Tube I.D.	A	B	C	D	F	GA	H	LB	LC	LH	LT	LX	LY	LZ	MM	NA	NB	NN	T	X	Y
6	15	12	14	3	8	14.5	28	15	4.5	9	1.6	24	16.5	32	M3×0.5	16	3	M6×1.0	3	5	7
10	15	12	14	4	8	8	28	15	4.5	9	1.6	24	16.5	32	M4×0.7	12.5	5.5	M8×1.0	-	5	7
16	15	18	20	5	8	8	28	23	5.5	14	2.3	33	25	42	M5×0.8	12.5	5.5	M10×1.0	-	6	9

Code Stroke 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 CYLINDERS**

**FA**



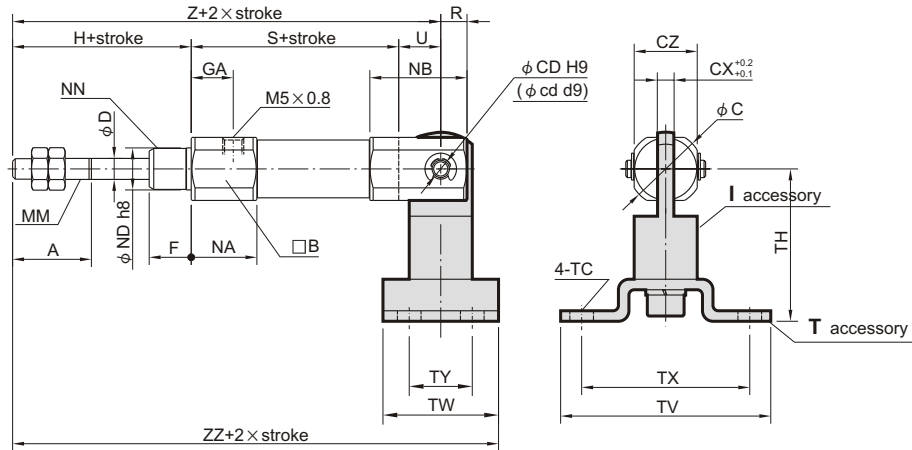
Code Tube I.D.	A	B	C	D	F	GA	H	FB	FC	FT	FX	FY	FZ	MM	NA	NB	NN	T	X	Y
6	15	12	14	3	8	14.5	28	11	4.5	1.6	24	14	32	M3×0.5	16	3	M6×1.0	3	5	7
10	15	12	14	4	8	8	28	13	4.5	1.6	24	14	32	M4×0.7	12.5	5.5	M8×1.0	-	5	7
16	15	18	20	5	8	8	28	19	5.5	2.3	33	20	42	M5×0.8	12.5	5.5	M10×1.0	-	6	9

Code Stroke 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)



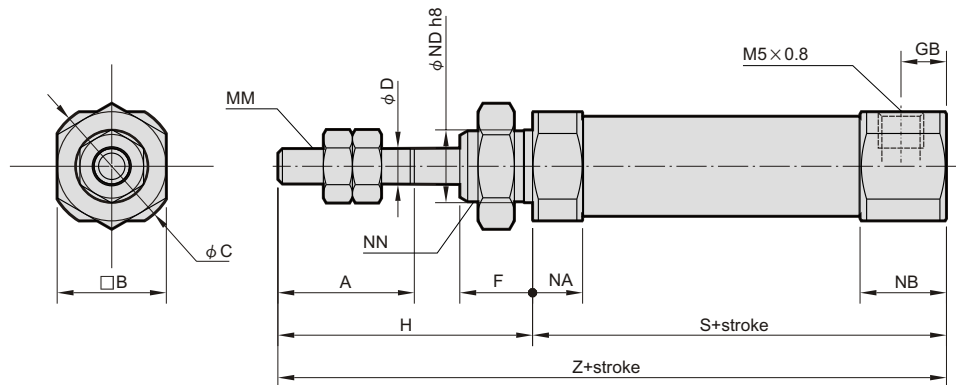
Code Tube I.D.	A	B	C	CD (cd)	CX	CZ	D	F	GA	H	MM	NA	NB	ND	NN	R	TC	TH	TV	TW	TX	TY	U
10	15	12	14	3.3	3.2	12	4	8	8	28	M4×0.7	12.5	18.5	8 <sup>0</sup> <sub>-0.022</sub>	M8×1.0	5	4.5	29	40	22	32	12	8
16	15	18	20	5	6.5	18	5	8	8	28	M5×0.8	12.5	23.5	10 <sup>0</sup> <sub>-0.022</sub>	M10×1.0	8	5.5	35	48	28	38	16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

Code Stroke 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
10	48.5	56	68	80	-	-	-	-	84.5	92	104	116	-	-	-	-
16	48.5	57	69	81	87	111	129	141	86.5	95	107	119	125	149	167	179

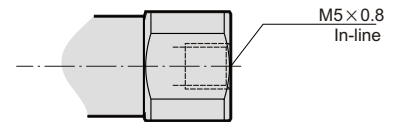
Code Stroke I.D.	ZZ							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
10	95.5	103	115	127	-	-	-	-
16	100.5	109	121	133	139	163	181	193

**PEN CYLINDERS**

**15**



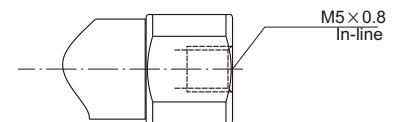
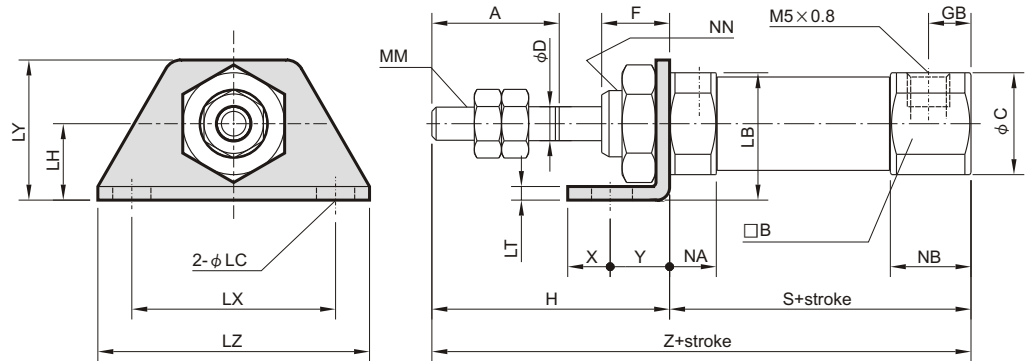
Code Tube I.D.	A	B	C	D	F	GB	H	MM	NA	NB	ND	NN
6	15	8	9	3	8	-	28	M3×0.5	3	7	6 <sup>0</sup> <sub>-0.018</sub>	M6×1.0
10	15	12	14	4	8	5	28	M4×0.7	5.5	9.5	8 <sup>0</sup> <sub>-0.022</sub>	M8×1.0
16	15	18	20	5	8	5	28	M5×0.8	5.5	9.5	10 <sup>0</sup> <sub>-0.022</sub>	M10×1.0



Code Stroke 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**



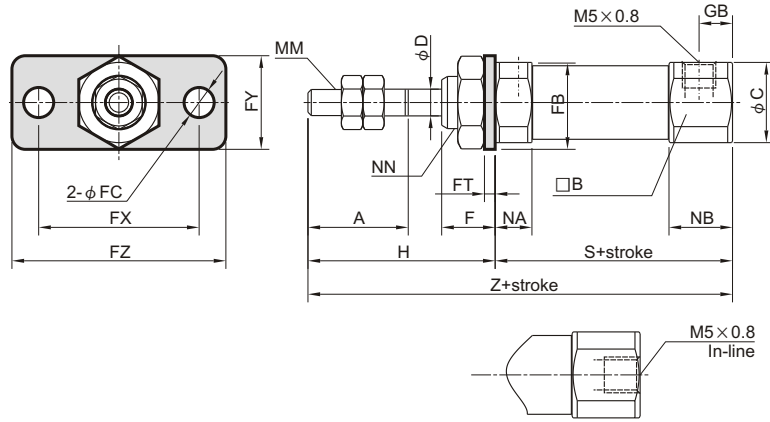
Code Tube I.D.	A	B	C	D	F	GB	H	LB	LC	LH	LT	LX	LY	LZ	MM	NA	NB	NN	X	Y
6	15	8	9	3	8	-	28	13	4.5	9	1.6	24	16.5	32	M3×0.5	3	7	M6×1.0	5	7
10	15	12	14	4	8	5	28	15	4.5	9	1.6	24	16.5	32	M4×0.7	5.5	9.5	M8×1.0	5	7
16	15	18	20	5	8	5	28	23	5.5	14	2.3	33	25	42	M5×0.8	5.5	9.5	M10×1.0	6	9

Code Stroke 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 CYLINDERS

FA



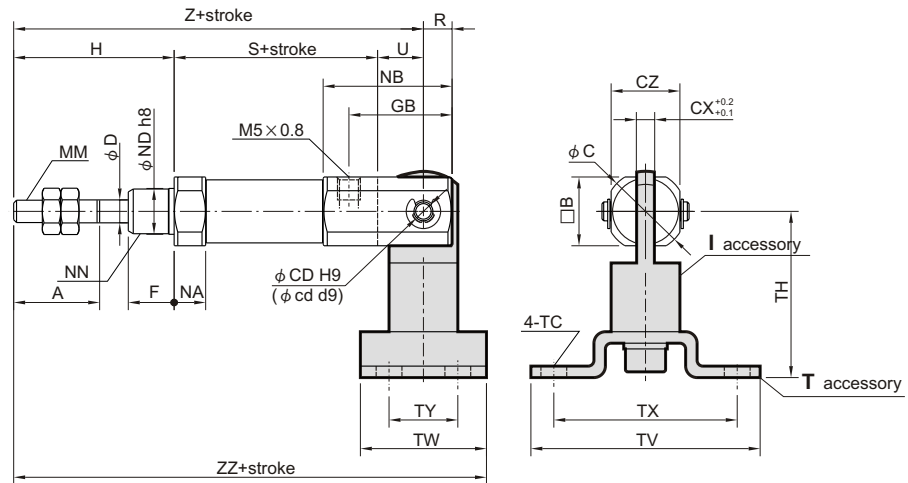
Code Tube I.D.	A	B	C	D	F	GB	H	FB	FC	FT	FX	FY	FZ	MM	NA	NB	NN	X	Y
6	15	8	9	3	8	-	28	11	4.5	1.6	24	14	32	M3×0.5	3	7	M6×1.0	5	7
10	15	12	14	4	8	5	28	13	4.5	1.6	24	14	32	M4×0.7	5.5	9.5	M8×1.0	5	7
16	15	18	20	5	8	5	28	19	5.5	2.3	33	20	42	M5×0.8	5.5	9.5	M10×1.0	6	9

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

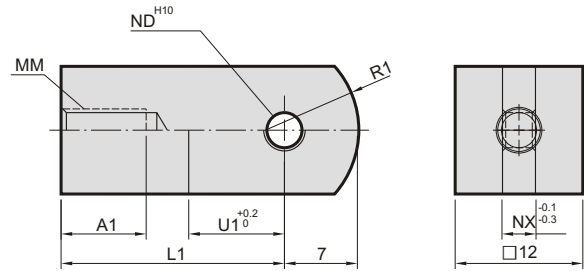
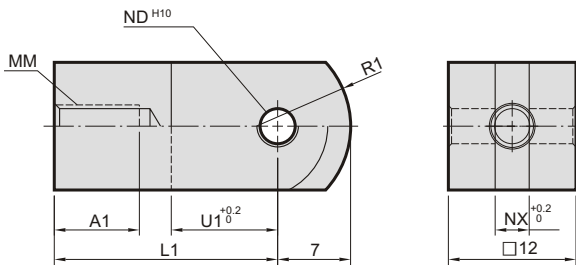
Code Stroke I.D.	S								Z							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
10	45.5	53	65	77	-	-	-	-	81.5	89	101	113	-	-	-	-
16	45.5	54	66	78	84	108	126	138	83.5	92	104	116	122	146	164	176

Code Stroke I.D.	ZZ							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
10	92.5	100	112	124	-	-	-	-
16	97.5	106	118	130	136	160	178	190

**PEN CYLINDERS**

**Y connector**

**I connector**



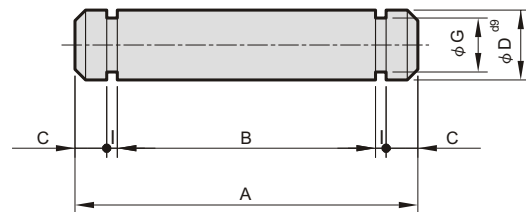
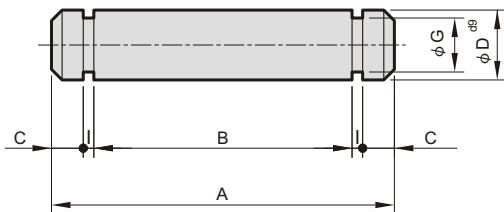
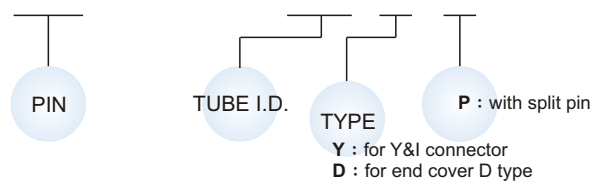
Code Tube I.D.	A1	L1	MM	ND <sup>H10</sup>	NX	R1	U1
10	8	21	M4×0.7	3.3 <sup>+0.048/0</sup>	3.2	8	10
16	11	21	M5×0.8	5 <sup>+0.048/0</sup>	6.5	12	10

Code Tube I.D.	A1	L1	MM	ND <sup>H10</sup>	NX	R1	U1
10	8	21	M4×0.7	3.3 <sup>+0.048/0</sup>	3.1	8	9
16	8	25	M5×0.8	5 <sup>+0.048/0</sup>	6.4	12	14

**Pin**

**Order example**

**PIN – MCMJ – 10 – Y – P**



**for I & Y connector**

**for end cover D type**

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

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