

MCMJ series

PEN CYLINDERS



Features:

- Non-lubrication:**
 Designs of oil-filled alloy, special housing and bushing provide the needed self-lubrication of piston rod.
- High quality-long service life:**
 Hard anodized aluminum cylinder tubes resist corrosion and abrasion.
- Cylinder mountings:**
 Available with a comprehensive selection of mountings for fixed or flexible installation.

Table for standard stroke

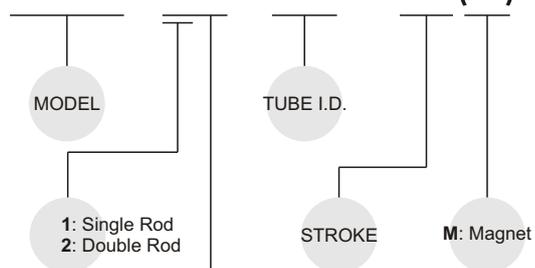
	Tube I.D.	Stroke (mm)
Single acting	φ 6	15,30,45,60
	φ 10	15,30,45,60
	φ 16	15,30,45,60,75,100,125,150
Double acting	φ 6	15,30,45,60
	φ 10	15,30,45,60,75,100,125,150
	φ 16	15,30,45,60,75,100,125,150,175,200

Model		MCMJ	
Tube I.D. (mm)		φ 6	φ 10 φ 16
Port size Rc(PT)		M5 × 0.8	
Medium		Air	
Max operation pressure		7 kgf/cm ²	
Min operation pressure (kgf/cm ²)	Single acting	normally extended	2.5
		normally returned	2.0
	Double acting	1.2	0.6
Proof pressure		10 kgf/cm ²	
Ambient temperature		-5~+60°C (No freezing)	
Lubrication		Not required	
Sensor switch		RCM, RCS	
Sensor switch band		BJ6	BJ10 BJ16
		BM6	BM10 BM16

● Sensor switch band BM** only for RCM.

Order example:

MCMJ-11-16-45(M)-B-FA



END COVER TYPE:

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

MOUNTING TYPE

	LB
	FA
	T

STYLE:

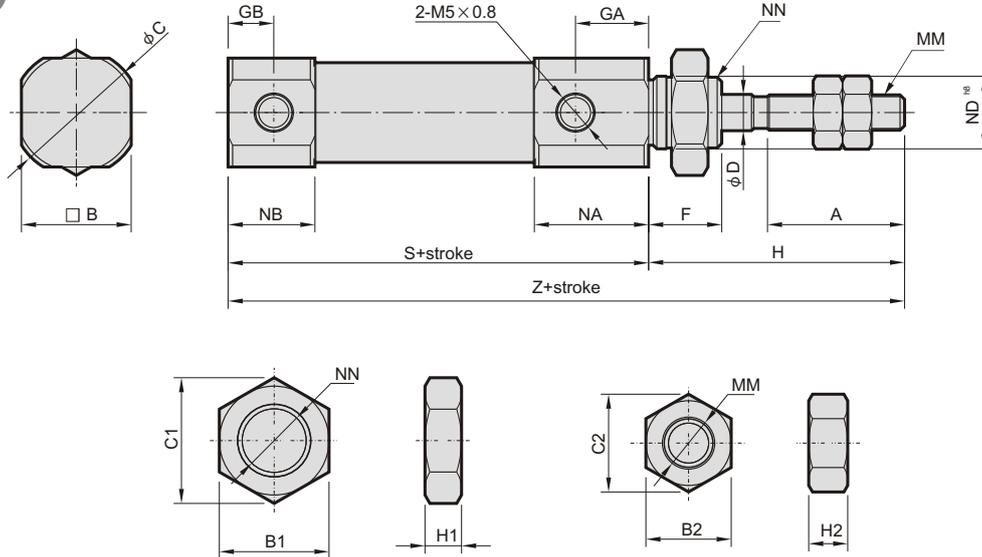
Code	Symbol	Description
1 1		Double acting / Male thread
1 3		Single acting / Normally extended male thread
1 5		Single acting / Normally returned male thread
2 1		Dual rod / Male thread
2 7		Dual rod / Adjustable male thread

MCMJ Double acting $\phi 10 \sim \phi 16$

PEN CYLINDERS

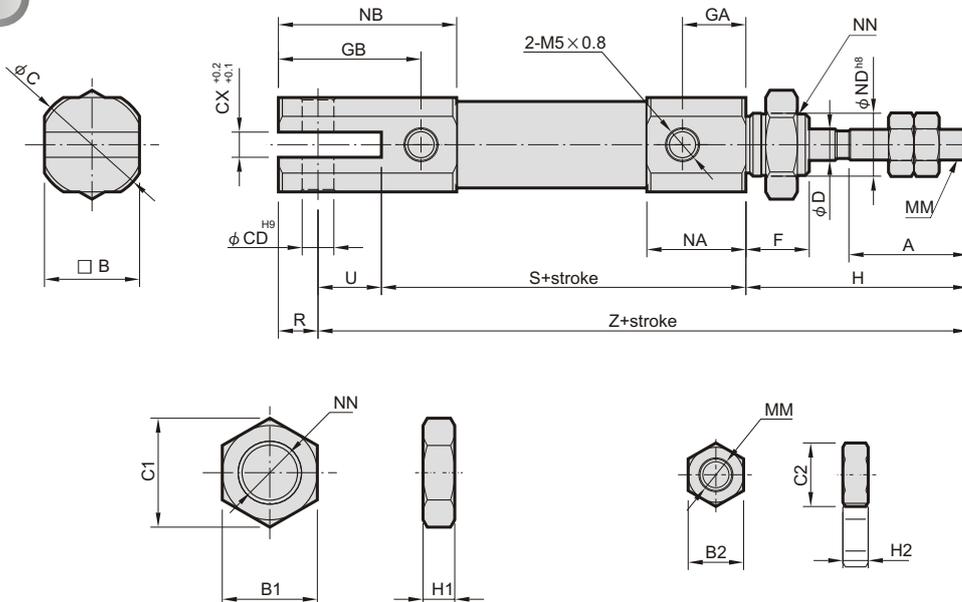


B



Code Tube I.D.	A	B	B1	B2	C	C1	C2	D	F	GA	GB	H	H1	H2	MM	NA	NB	ND ^{h8}	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 ⁰ _{-0.022}	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 ⁰ _{-0.022}	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 ^{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	M4×0.7	12.5	22.5	8 ⁰ _{-0.022}	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 ⁰ _{-0.022}	M10×1.0	8	47	10	85

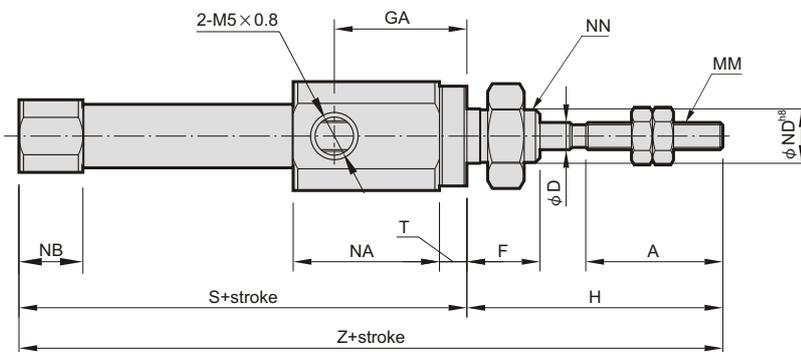
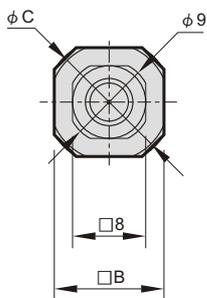
MCMJ Double acting $\phi 6 \sim \phi 16$

PEN CYLINDERS

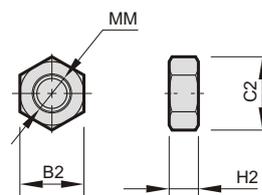
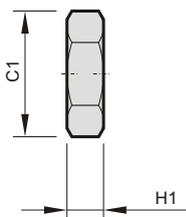
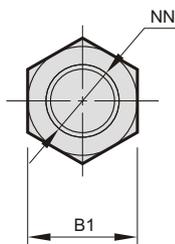
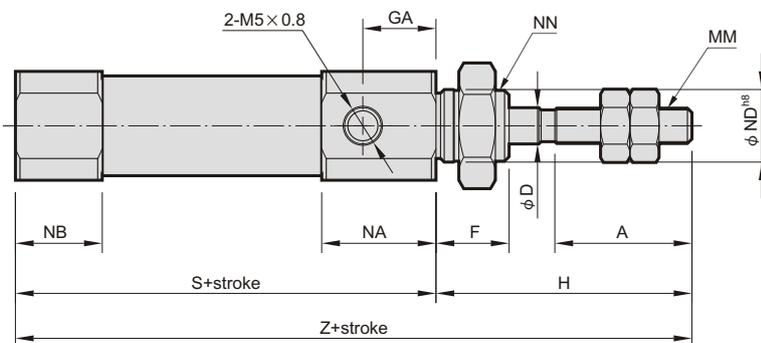
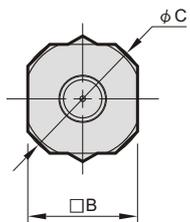


R

MCMJ-6

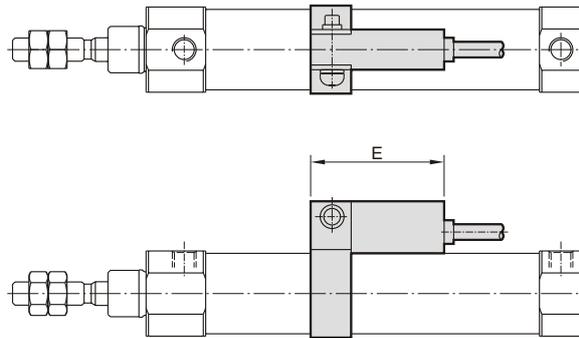
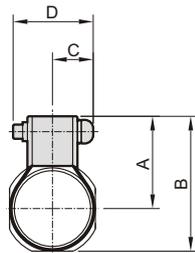


MCMJ-10 / MCMJ-16



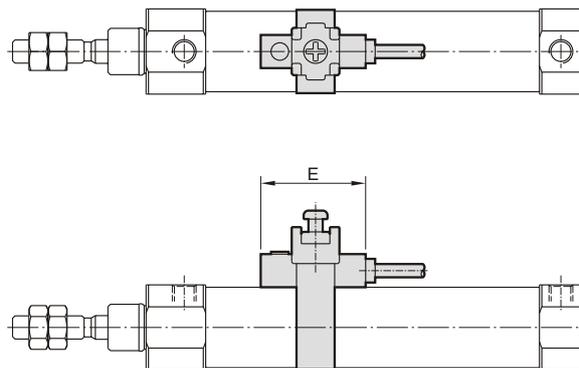
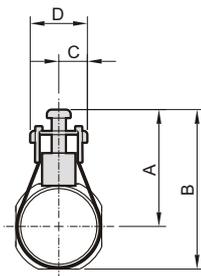
Code Tube I.D.	A	B	B1	B2	C	C1	C2	D	F	GA	H	H1	H2	MM	NA	NB	ND ^{h8}	NN	S	T	Z
6	15	12	8	5.5	14	9.2	6.4	3	8	14.5	28	4	2.4	M3×0.5	16	7	6 ⁰ _{-0.022}	M6×1.0	49	3	77
10	15	12	11	7	14	12.7	8.1	4	8	8	28	4	3.2	M4×0.7	12.5	9.5	8 ⁰ _{-0.022}	M8×1.0	46		74
16	15	18	14	8	20	16.2	9.2	5	8	8	28	4	4	M5×0.8	12.5	9.5	10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

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

Sensor switch : RCS
 Sensor switch band : BJ**



Code Tube I.D.	A	B	C	D	E
6	20	26	6	12	22
10	22	28	6	12	22
16	25	34	6	12	22

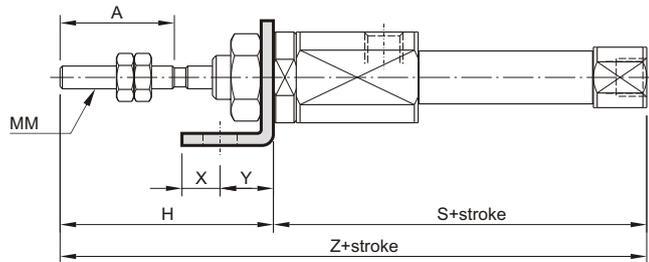
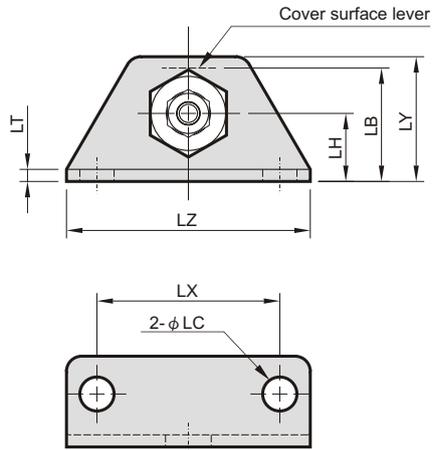
MCMJ Double acting $\phi 6 \sim \phi 16$

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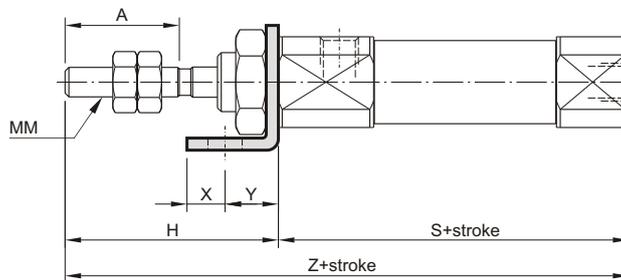
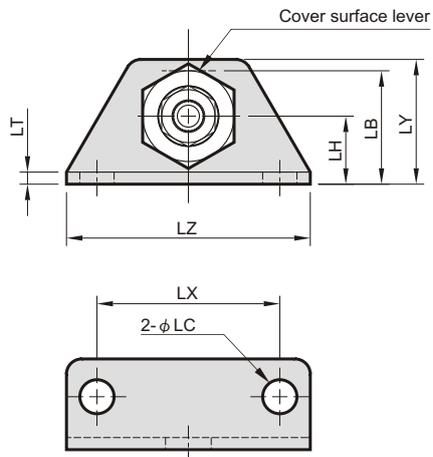


LB

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

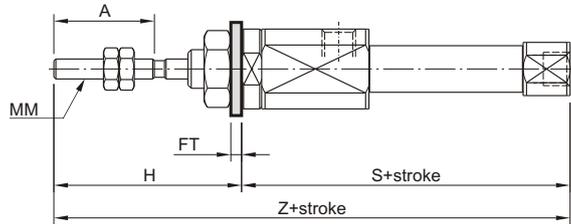
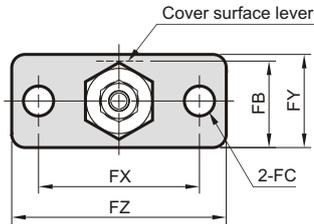
MCMJ Double acting $\phi 6 \sim \phi 16$

PEN CYLINDERS

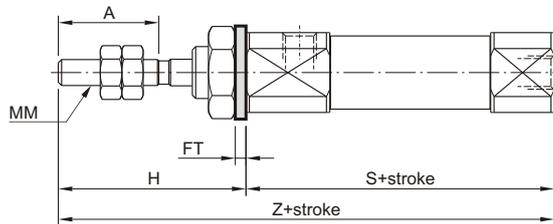
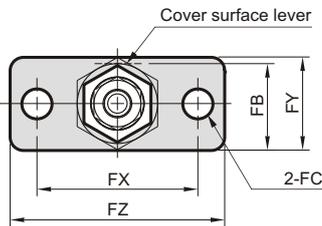


FA

$\phi 6$

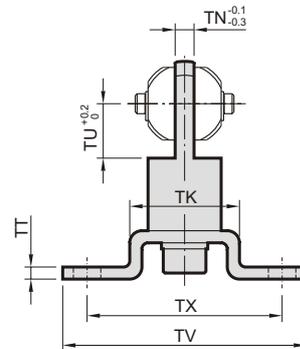
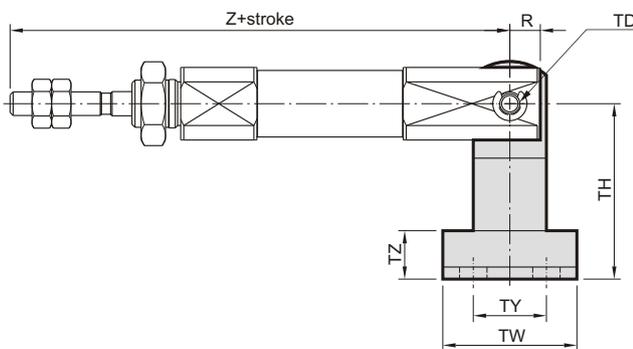
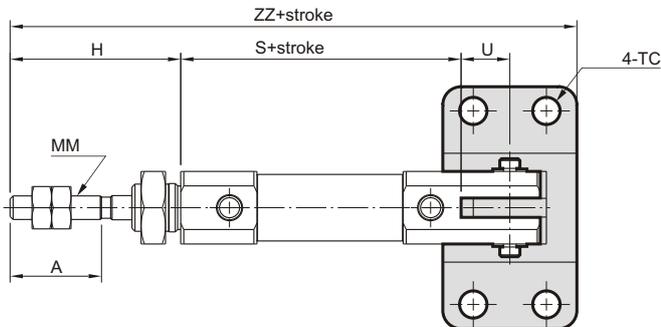


$\phi 10 \sim \phi 16$



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



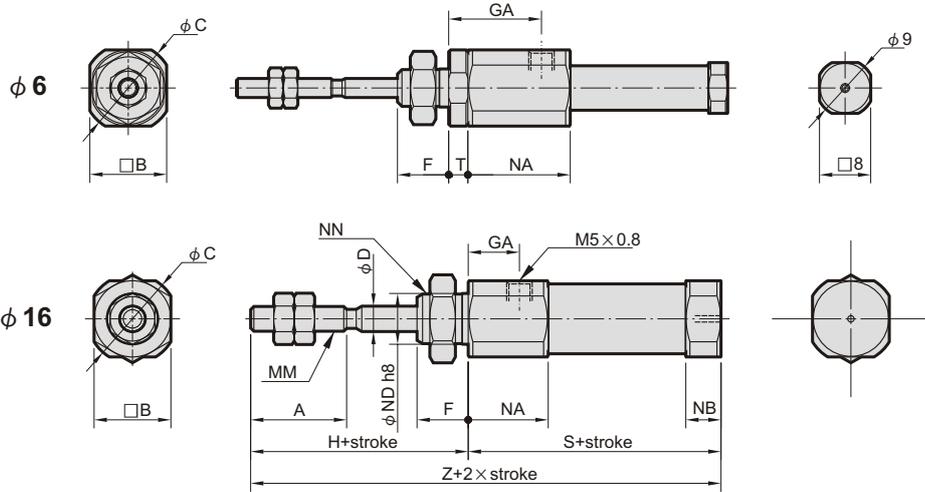
Code Tube I.D.	A	H	MM	R	S	TC	TD ^{H10}	TH	TK	TN	TT	TU	TV	TW	TX	TY	TZ	U	Z	ZZ
10	15	28	M4×0.7	5	46	4.5	3.3 ^{+0.048} / ₀	29	18	3.1	2	9	40	22	32	12	8	8	8	93
16	15	28	M5×0.8	8	47	4.5	5 ^{+0.048} / ₀	35	20	6.4	2.3	14	48	28	38	16	10	10	10	99

MCMJ Normally extended $\phi 6 \sim \phi 16$

PEN CYLINDERS



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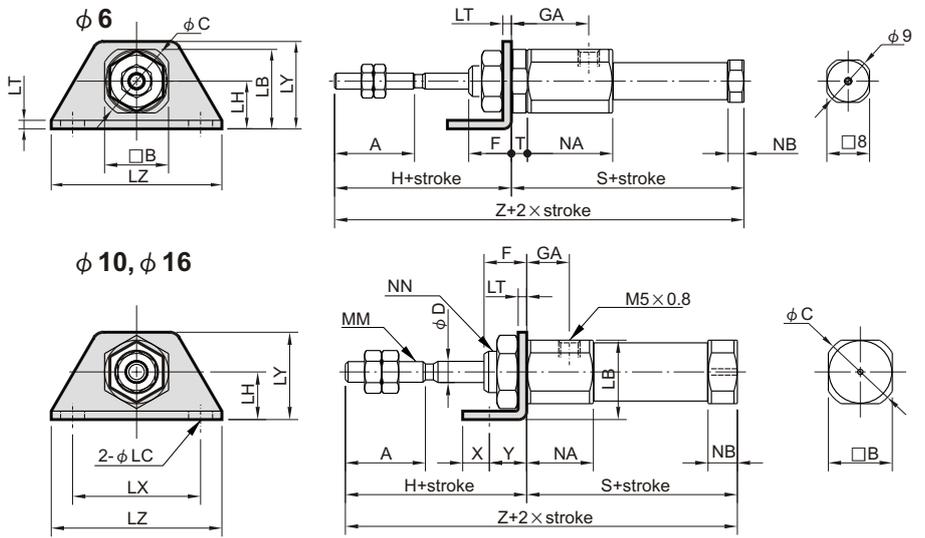


Code Tube I.D.	A	B	C	D	F	GA	H	MM	NA	NB	ND	NN	T
6	15	12	14	3	8	14.5	28	M3 x 0.5	16	3	6 ⁰ _{-0.018}	M6 x 1.0	3
10	15	12	14	4	8	8	28	M4 x 0.7	12.5	5.5	8 ⁰ _{-0.022}	M8 x 1.0	-
16	15	18	20	5	8	8	28	M5 x 0.8	12.5	5.5	10 ⁰ _{-0.022}	M10 x 1.0	-

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 x 0.5	16	3	M6 x 1.0	3	5	7
10	15	12	14	4	8	8	28	15	4.5	9	1.6	24	16.5	32	M4 x 0.7	12.5	5.5	M8 x 1.0	-	5	7
16	15	18	20	5	8	8	28	23	5.5	14	2.3	33	25	42	M5 x 0.8	12.5	5.5	M10 x 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

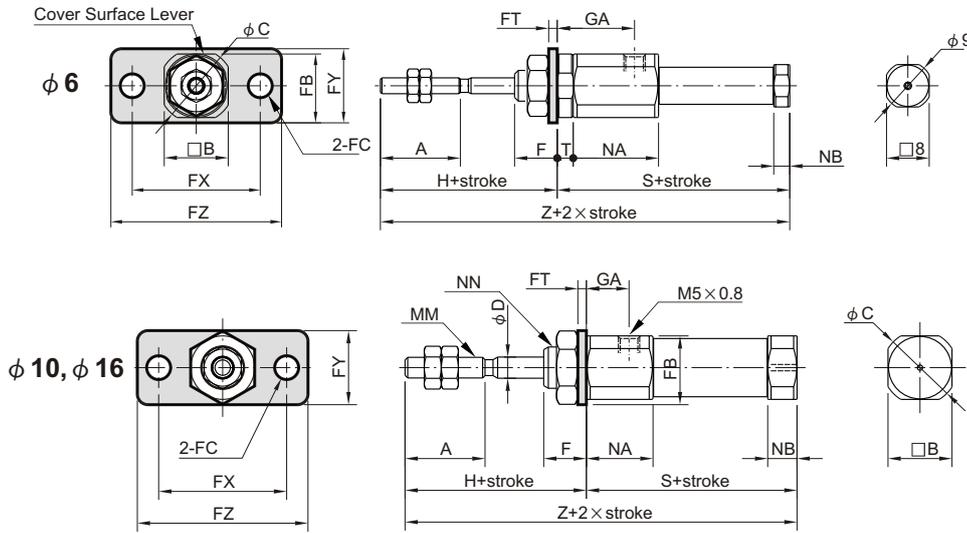
※(S), (Z) () indicate the size of that with magnet ring

MCMJ Normally extended $\phi 6 \sim \phi 16$

PEN CYLINDERS



FA

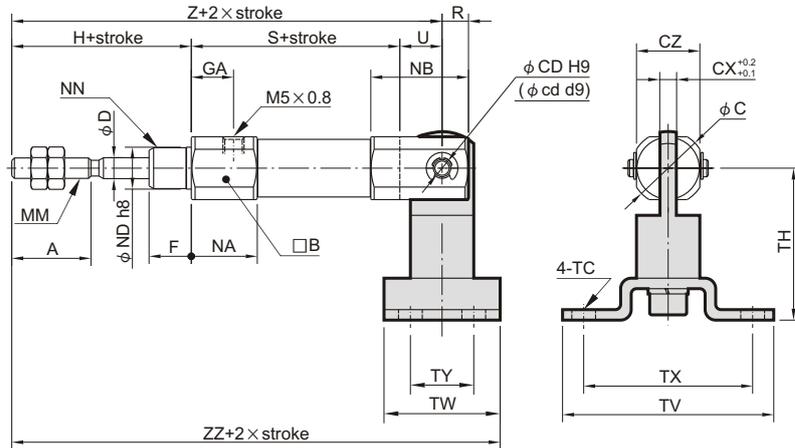


Code Tube I.D.	A	B	C	D	F	GA	H	FB	FC	FT	FX	FY	FZ	MM	NA	NB	NN	T	X	Y
6	15	12	14	3	8	14.5	28	11	4.5	1.6	24	14	32	M3×0.5	16	3	M6×1.0	3	5	7
10	15	12	14	4	8	8	28	13	4.5	1.6	24	14	32	M4×0.7	12.5	5.5	M8×1.0	-	5	7
16	15	18	20	5	8	8	28	19	5.5	2.3	33	20	42	M5×0.8	12.5	5.5	M10×1.0	-	6	9

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



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	TU	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 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

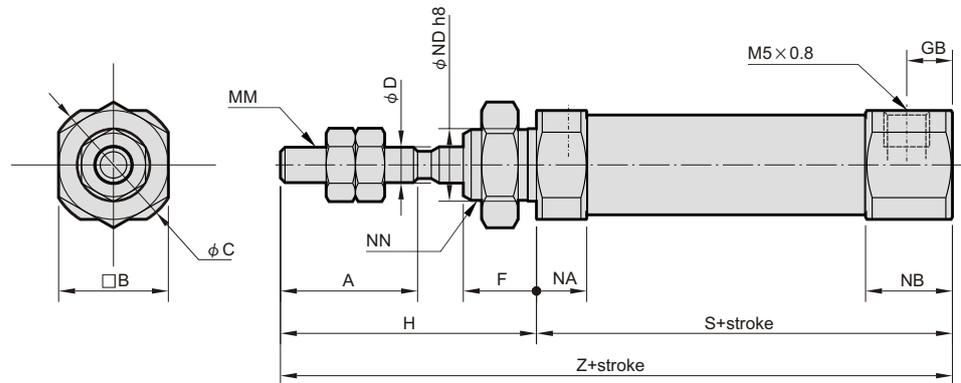
Code Stroke I.D.	ZZ							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
10	95.5	103	115	127	-	-	-	-
16	100.5	109	121	133	139	163	181	193

MCMJ Normally returned $\phi 6 \sim \phi 16$

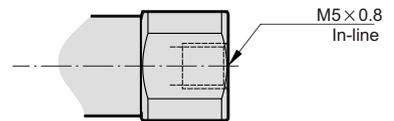
PEN CYLINDERS



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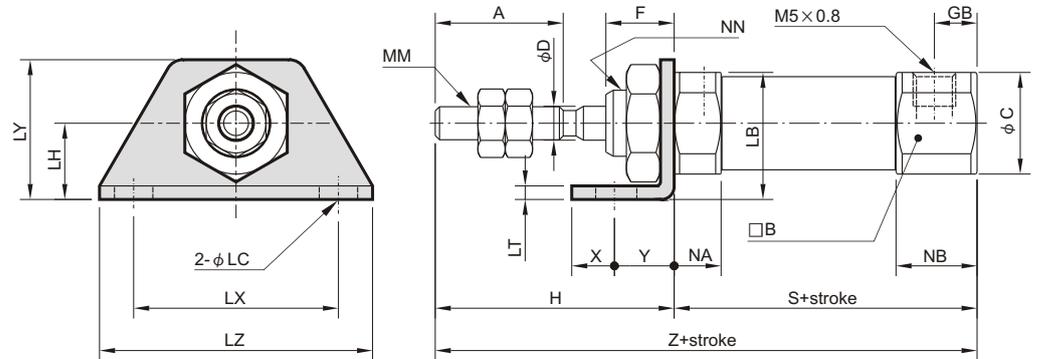
Code Tube I.D.	A	B	C	D	F	GB	H	MM	NA	NB	ND	NN
6	15	8	9	3	8	-	28	M3x0.5	3	7	6 ⁰ _{-0.018}	M6x1.0
10	15	12	14	4	8	5	28	M4x0.7	5.5	9.5	8 ⁰ _{-0.022}	M8x1.0
16	15	18	20	5	8	5	28	M5x0.8	5.5	9.5	10 ⁰ _{-0.022}	M10x1.0



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	M3x0.5	3	7	M6x1.0	5	7
10	15	12	14	4	8	5	28	15	4.5	9	1.6	24	16.5	32	M4x0.7	5.5	9.5	M8x1.0	5	7
16	15	18	20	5	8	5	28	23	5.5	14	2.3	33	25	42	M5x0.8	5.5	9.5	M10x1.0	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

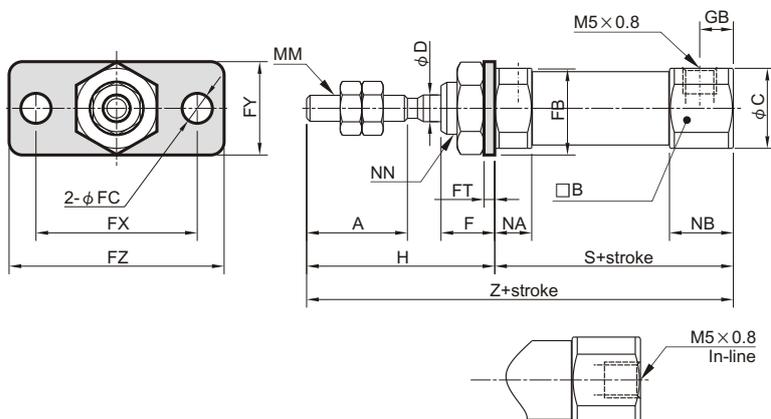
※(S), (Z) () indicate the size of that with magnet ring

MCMJ Normally returned $\phi 6 \sim \phi 16$

PEN CYLINDERS



FA

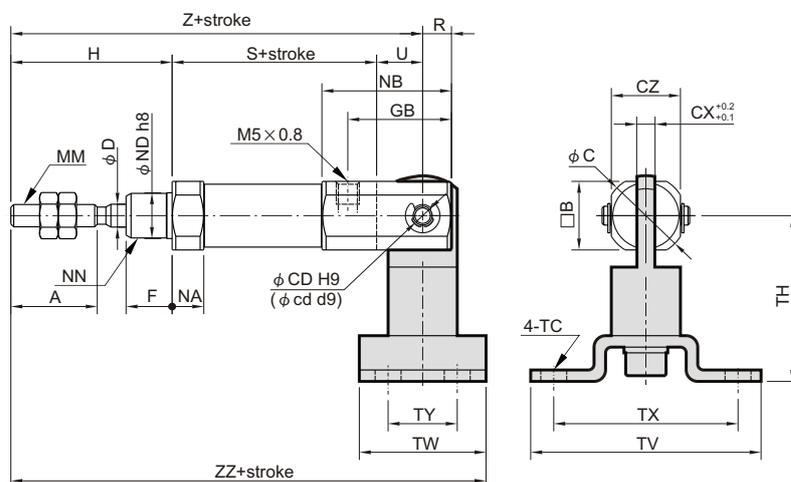


Code Tube I.D.	A	B	C	D	F	GB	H	FB	FC	FT	FX	FY	FZ	MM	NA	NB	NN	X	Y
6	15	8	9	3	8	-	28	11	4.5	1.6	24	14	32	M3×0.5	3	7	M6×1.0	5	7
10	15	12	14	4	8	5	28	13	4.5	1.6	24	14	32	M4×0.7	5.5	9.5	M8×1.0	5	7
16	15	18	20	5	8	5	28	19	5.5	2.3	33	20	42	M5×0.8	5.5	9.5	M10×1.0	6	9

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



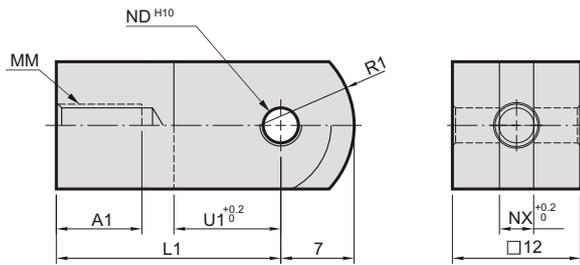
Code Tube I.D.	A	B	C	CD (cd)	CX	CZ	D	F	GB	H	MM	NA	NB	ND	NN	R	U	TC	TH	TV	TW	TX	TU
10	15	12	14	3.3	3.2	12	4	8	18	28	M4×0.7	5.5	9.5	8 ⁰ _{-0.022}	M8×1.0	5	8	4.5	29	40	22	32	12
16	15	18	20	5	6.5	18	5	8	23	28	M5×0.8	5.5	9.5	10 ⁰ _{-0.022}	M10×1.0	8	10	5.5	35	48	28	38	16

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

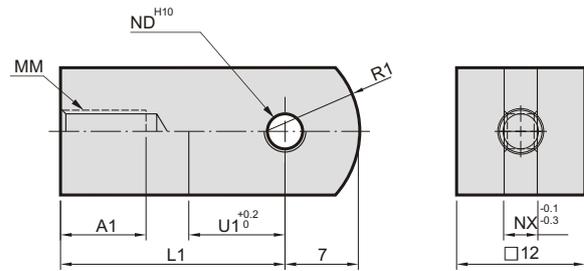
PEN CYLINDERS

Y connector



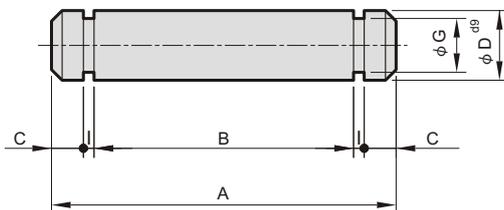
Code Tube I.D.	A1	L1	MM	ND ^{H10}	NX	R1	U1
10	8	21	M4×0.7	3.3 ^{+0.048} ₀	3.2	8	10
16	11	21	M5×0.8	5 ^{+0.048} ₀	6.5	12	10

I connector



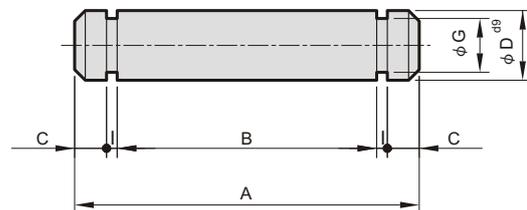
Code Tube I.D.	A1	L1	MM	ND ^{H10}	NX	R1	U1
10	8	21	M4×0.7	3.3 ^{+0.048} ₀	3.1	8	9
16	8	25	M5×0.8	5 ^{+0.048} ₀	6.4	12	14

Pin for I & Y 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

Pin 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