



Features

■ Non lubrication

- Special housing and bushing enables self lubrication of piston rod.

■ High quality long service life

- Hard anodised stainless steel cylinder tubes offer a high resistance to corrosion and low internal friction.
- Cylinder mountings, available with a comprehensive range of accessories for rigid or flexible mounting.

■ Magnetic as standard

Specification

Model		MCMB			
Tube I.D.		20	25	32	40
Port size		Rc1/8			Rc1/4
Medium		Air			
Max. operating pressure		1 MPa			
Min. operating pressure	Double acting	0.05 MPa			
	Single acting	Extended: 0.23, Returned: 0.18 MPa			
Proof pressure		1.5 MPa			
Ambient temperature		-5~+60°C (No freezing)			
Lubricator		Not required			
Available speed range		50~500 mm/sec			
Max. allowable kinetic energy (J)	Cushion pad	0.27	0.4	0.65	1.2
	Cushion air	0.54	0.78	1.27	2.35
Sensor switch (*)		RCM			
Sensor switch (band)		BM20	BM25	BM32	BM40

Table for standard stroke

Tube I.D.	Stroke (mm)
ø20,25,32,40	25,50,75,100,125,150,200,250,300

Order example

MCMB - 11 - 20 - 50 - A - N - G

MODEL

- 1: Single rod
- 2: Double rod

TUBE I.D.

STROKE

- Blank: Cushion pad (Unadjustable)
- A: Cushion air (Adjustable) ⚠

PORT THREAD

- Blank: Rc thread
- G: G thread
- NPT: NPT thread

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 Please mark "adjustable distance(mm)" at order list

END COVER TYPE

Code	Symbol	Description
Blank		Standard type
N		End-plain
E		With pivot type

* Single acting type, please consult us.

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

Mounting accessories

LB - MCMB - 20

MODEL

TUBE I.D.

MOUNTING TYPE

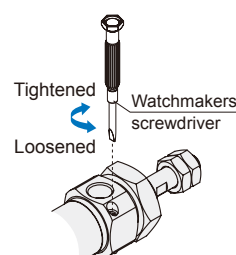
	LB		SDB*
	CA		TA
	CB		TB
	FA		Y
	FB		I

* For end cover "E" type.

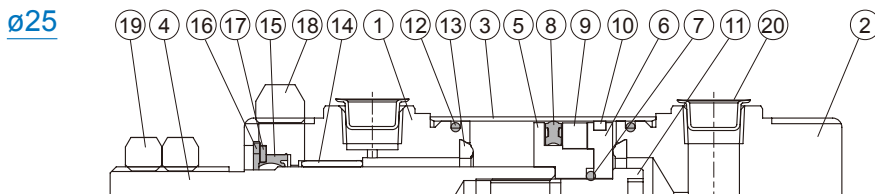
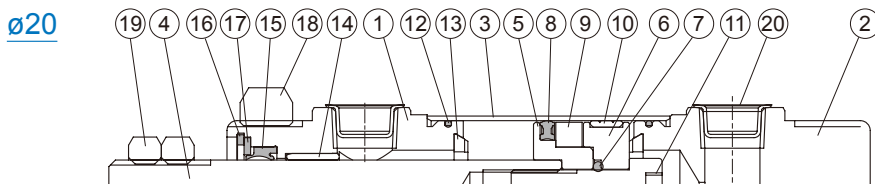
⚠ Caution

For (A) Cushion air (Adjustable)

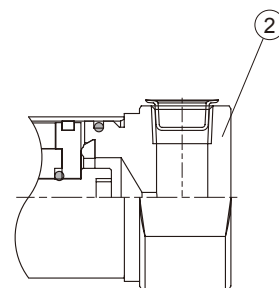
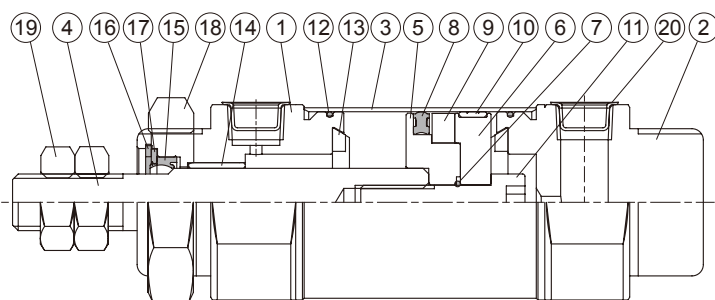
1. To adjust a cushion needle, please slowly turn the needle valve from the fully closed status to the required status whose turns need to be within 2.5 circles.
2. If the needle valve loosen excessively, the buffer can't take effect and the lifetime of cylinder can shorten.



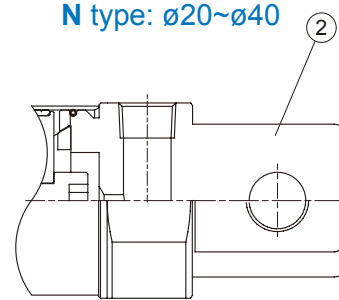
MINIATURE CYLINDER



ø32, ø40



N type: ø20~ø40



E type: ø20~ø40

Material

No.	Tube I.D. Part name	20	25	32	40	Q'y		Component parts (inclusion)		Repair kits (inclusion)
						11 type	21 type	11 type	21 type	
1	Rod cover	Aluminum alloy				1	2	●	●	
2	Head cover	Aluminum alloy				1	—	●		
3	Tube	Stainless steel				1	1			
4	Piston rod	Carbon steel				1	1			
5	Piston-R	Aluminum alloy				1	1	●	●	
6	Piston-H	Aluminum alloy				1	1	●	●	
7	Piston gasket	NBR				1	1	●	●	
8	Piston packing	NBR				1	1	●	●	
9	Magnet ring	Magnet material				1	1	●	●	
10	Wear ring	Teflon+Graphite				1	1	●	●	
11	Piston bolt	SCM				1	—	●		
12	Cover ring	NBR				2	2	●	●	
13	Cushion gasket	NBR				2	2	●	●	
14	Rod bush	Bearing alloy				1	2	●	●	
15	Rod packing	NBR				1	2	●	●	●
16	Snap ring	Spring steel				1	2	●	●	
17	Washer	Carbon steel				1	2	●	●	
18	Tie nut	Carbon steel				1	2	●	●	
19	Rod front nut	Carbon steel				2	2	●	●	
20	Port plug	Plastic				2	2	●	●	

Order example

Component parts / Repair kits

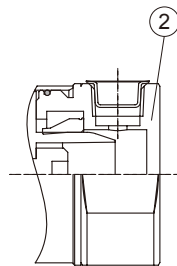
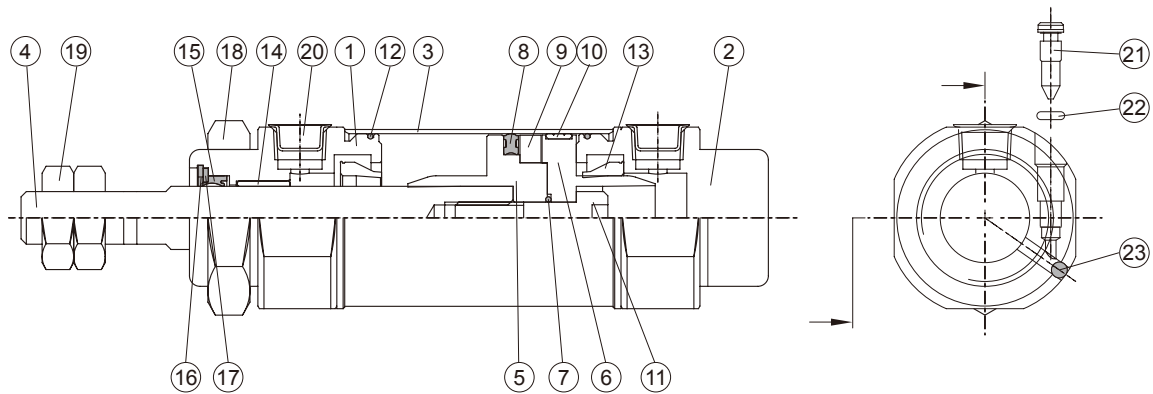
Tube I.D.	Component parts	Repair kits
ø20	CP-MCMB-20	PS-MCMB-20
ø25	CP-MCMB-25	PS-MCMB-25
ø32	CP-MCMB-32	PS-MCMB-32
ø40	CP-MCMB-40	PS-MCMB-40

Non-pivot type (end-plain)

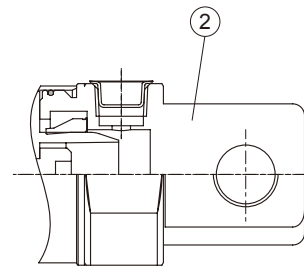
Tube I.D.	Component parts
ø20	CP-MCMB-20-N
ø25	CP-MCMB-25-N
ø32	CP-MCMB-32-N
ø40	CP-MCMB-40-N

Pivot type

Tube I.D.	Component parts
ø20	CP-MCMB-20-E
ø25	CP-MCMB-25-E
ø32	CP-MCMB-32-E
ø40	CP-MCMB-40-E



N type



E type

Material

No.	Tube I.D. Part name	20	25	32	40	Q'y		Component parts (inclusion)		Repair kits (inclusion)
						11 type	21 type	11 type	21 type	
1	Rod cover	Aluminum alloy				1	2	●	●	
2	Head cover	Aluminum alloy				1	—	●		
3	Tube	Stainless steel				1	1			
4	Piston rod	Carbon steel				1	1			
5	Piston-R	*1	*2	*1		1	1	●	●	
6	Piston-H	*1	*2	*1		1	1	●	●	
7	Piston gasket	NBR				1	1	●	●	
8	Piston packing	NBR				1	1	●	●	
9	Magnet ring	Magnet material				1	1	●	●	
10	Wear ring	Teflon+Graphite				1	1	●	●	
11	Piston bolt	SCM				1	—	●		
12	Cover ring	NBR				2	2	●	●	
13	Cushion packing	NBR				2	2	●	●	
14	Rod bush	Bearing alloy				1	2	●	●	
15	Rod packing	NBR				1	2	●	●	●
16	Snap ring	Spring steel				1	2	●	●	
17	Washer	Carbon steel				1	2	●	●	
18	Tie nut	Carbon steel				1	2	●	●	
19	Rod front nut	Carbon steel				2	2	●	●	
20	Port plug	Plastic				2	2	●	●	
21	Needle valve	Stainless steel	Carbon steel			2	2	●	●	
22	Needle valve packing	NBR				2	2	●	●	●
23	Steel ball	Stainless steel				2	2	●	●	

*1. Aluminum alloy *2. Polyurethane

Order example

Component parts / Repair kits

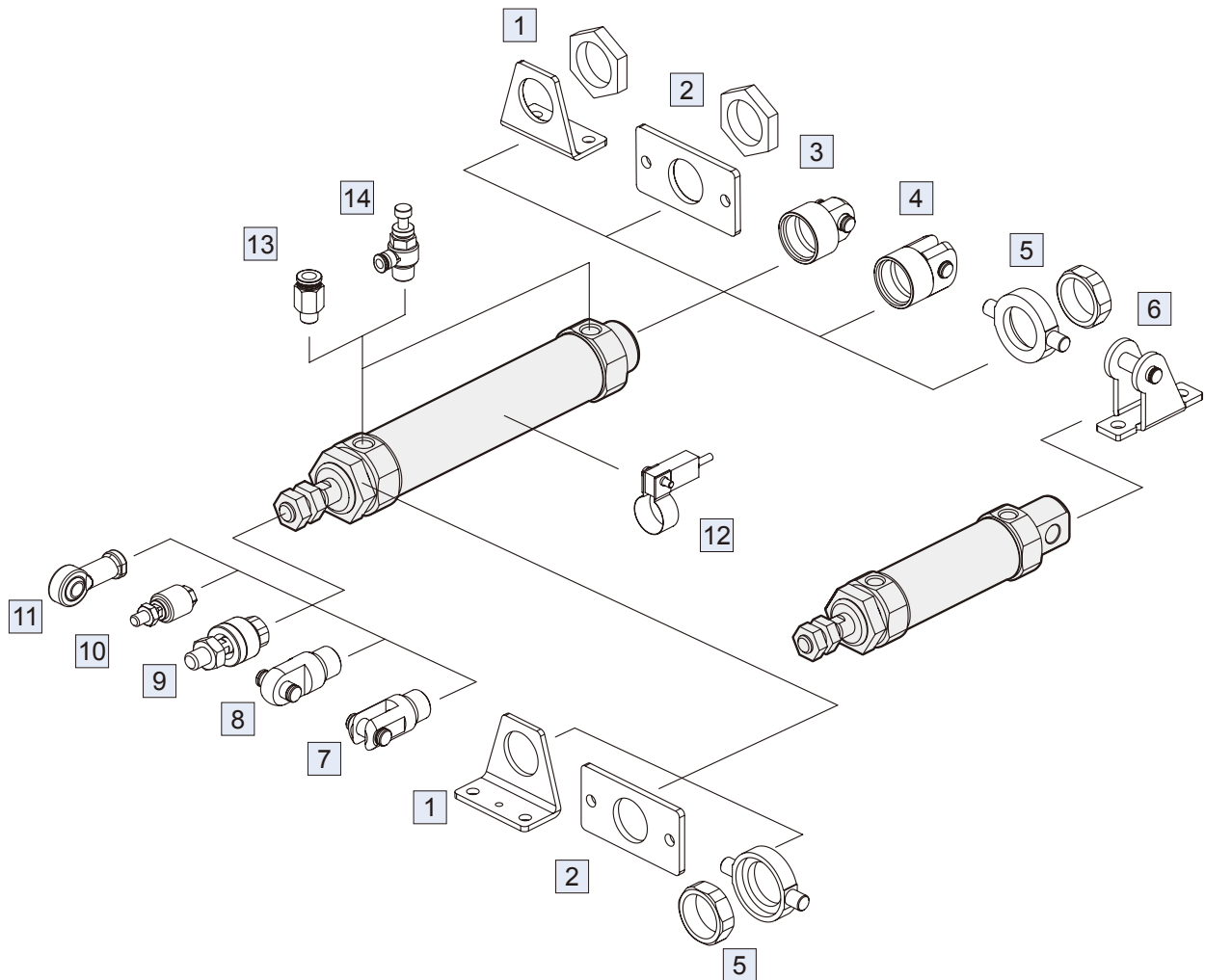
Tube I.D.	Component parts	Repair kits
ø20	CP-MCMB-20A	PS-MCMB-20A
ø25	CP-MCMB-25A	PS-MCMB-25A
ø32	CP-MCMB-32A	PS-MCMB-32A
ø40	CP-MCMB-40A	PS-MCMB-40A

Non-pivot type (end-plain)

Tube I.D.	Component parts
ø20	CP-MCMB-20A-N
ø25	CP-MCMB-25A-N
ø32	CP-MCMB-32A-N
ø40	CP-MCMB-40A-N

Pivot type

Tube I.D.	Component parts
ø20	CP-MCMB-20A-E
ø25	CP-MCMB-25A-E
ø32	CP-MCMB-32A-E
ø40	CP-MCMB-40A-E



No.	Accessories	Page
1	Mounting accessories LB	3-22
2	Mounting accessories FA/FB	3-23
3	Mounting accessories CA+PIN	3-22, 25
4	Mounting accessories CB+PIN	3-22, 25
5	Mounting accessories TA/TB	3-24
6	Mounting accessories SDB+PIN (*)	3-23, 25
7	Accessories Y+PIN	3-25
8	Accessories I+PIN	3-25

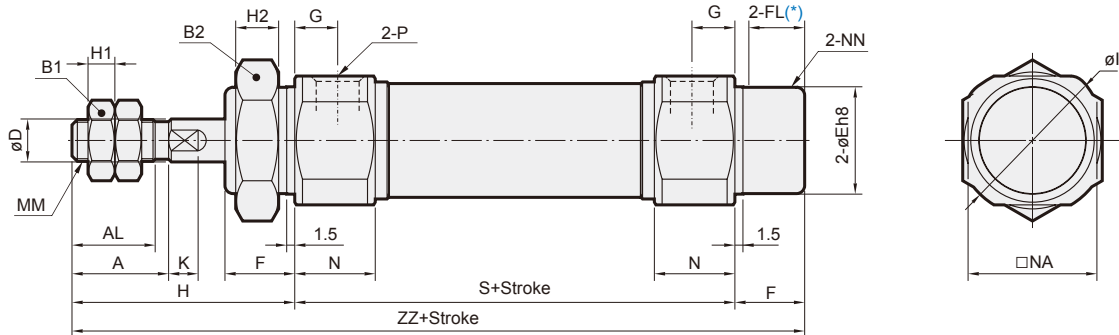
No.	Accessories	Page
9	Floating joint MFC	8-2
10	Floating joint MFCS	8-4
11	Female rod ends PHS	8-5
12	Sensor switch RCM+BM**	8-13
13	Fitting PC (PISCO)	8-5 (Vol.1)
14	Speed controller JSC (PISCO)	8-18 (Vol.1)

* Only for end cover "E" type.

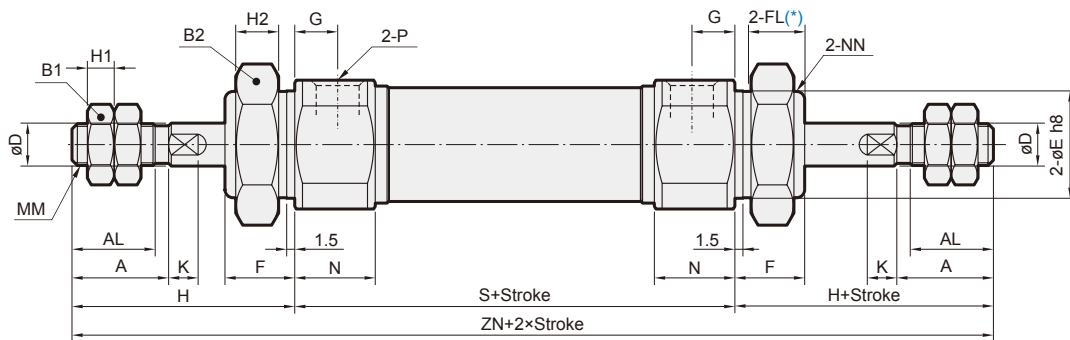
MINIATURE CYLINDER

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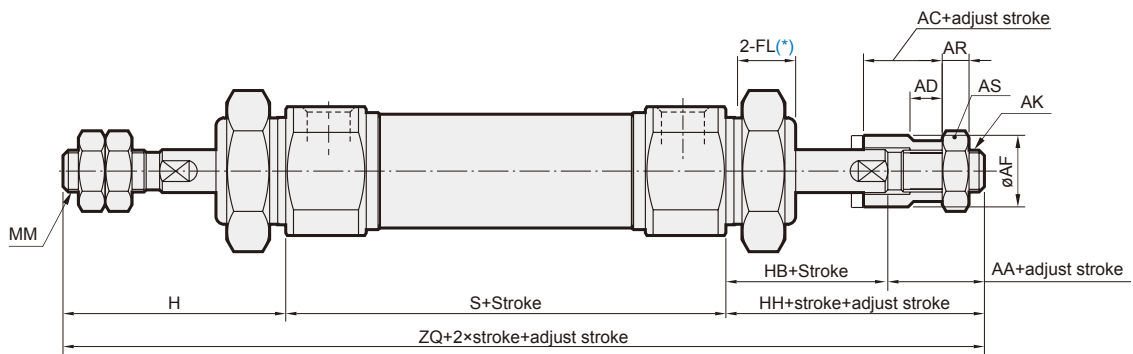
11



21



27



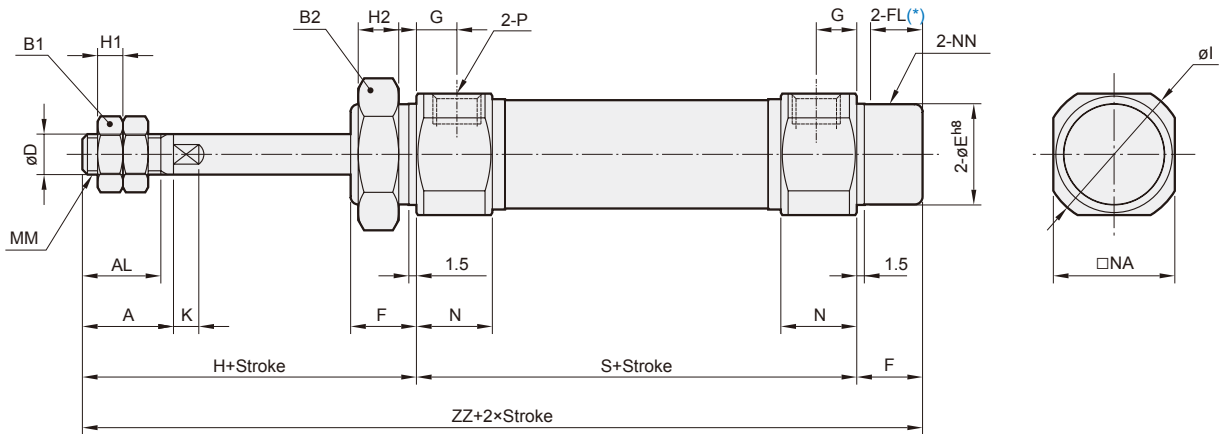
Unit: mm

Code Tube I.D.	A	AA	AC	AD	AF	AK	AL	AR	AS	B1	B2	D	E	F	FL	G	H	H1	H2	HB	HH	I	K	MM
20	18	17.5	15	9.5	16	M8×1.25	15.5	5	13	13	26	8	20 ⁰ _{-0.03}	13	10.5	8	41	5	8	20.5	38	28	5	M8×1.25
25	22	18.5	15	9.5	16	M8×1.25	19.5	5	13	17	32	10	26 ⁰ _{-0.03}	13	10.5	8	45	6	8	20.5	39	33.5	5	M10×1.25
32	22	16	12	7	20	M10×1.25	19.5	6	17	17	32	12	26 ⁰ _{-0.03}	13	10.5	8	45	6	8	20	36	37.5	5.5	M10×1.25
40	24	17	12	7	30	M12×1.25	21	7	19	22	41	14	32 ⁰ _{-0.04}	16	13.5	11	50	8	10	23	40	46.5	7	M14×1.5

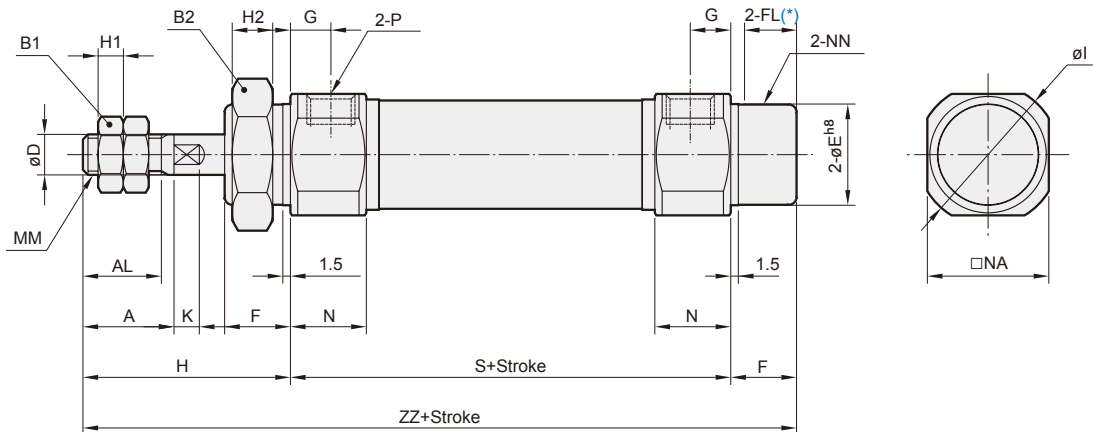
Code Tube I.D.	N	NA	NN	P	S	ZN	ZQ	ZZ
20	15	24	M20×1.5	Rc1/8	62	144	141	116
25	15	30	M26×1.5	Rc1/8	62	152	146	120
32	15	34.5	M26×1.5	Rc1/8	64	154	145	122
40	21.5	42.5	M32×2.0	Rc1/4	88	188	178	154

* FL: Effective thread length

13



15

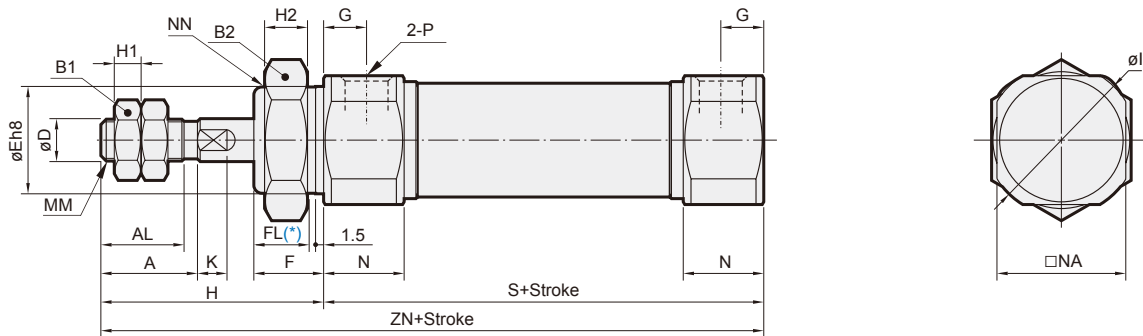


Code Tube I.D.	A	AL	B1	B2	D	E	F	FL	G	H	H1	H2	I	K	MM	N	NA	NN	P
20	18	15.5	13	26	8	20 ⁰ _{-0.03}	13	10.5	8	41	5	8	28	5	M8×1.25	15	24	M20×1.5	Rc1/8
25	22	19.5	17	32	10	26 ⁰ _{-0.03}	13	10.5	8	45	6	8	33.5	5	M10×1.25	15	30	M26×1.5	Rc1/8
32	22	19.5	17	32	12	26 ⁰ _{-0.03}	13	10.5	8	45	6	8	37.5	5.5	M10×1.25	15	34.5	M26×1.5	Rc1/8
40	24	21	22	41	14	32 ⁰ _{-0.04}	16	13.5	11	50	8	10	46.5	7	M14×1.5	21.5	42.5	M32×2.0	Rc1/4

Code Stroke Tube I.D.	S			ZZ		
	1~50	51~100	101~150	1~50	51~100	101~150
20	87	112	137	141	166	191
25	87	112	137	145	170	195
32	89	114	139	147	172	197
40	113	138	163	179	204	229

* FL: Effective thread length

N

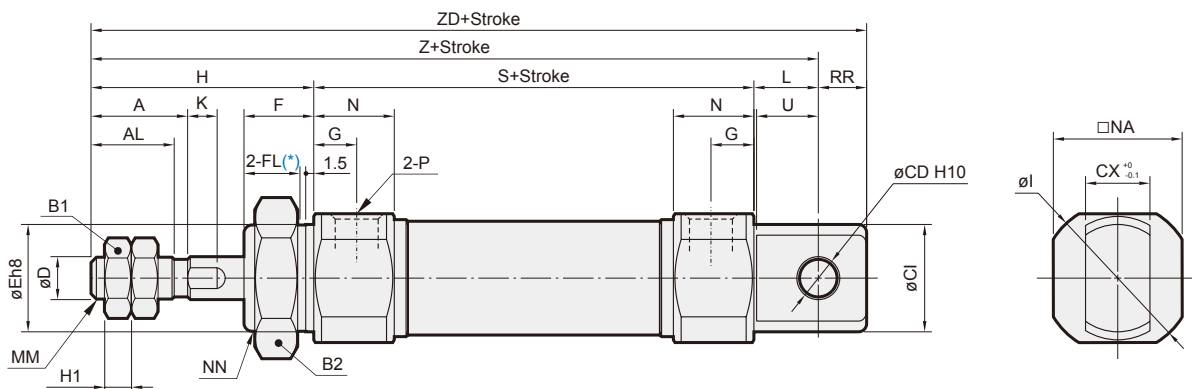


* FL: Effective thread length

Unit: mm

Code Tube I.D.	A	AL	B1	B2	D	E	F	FL	G	H	H1	H2	I	K	MM	N	NA	NN	P	S	ZN
20	18	15.5	13	26	8	20 ⁰ _{-0.03}	13	10.5	8	41	5	8	28	5	M8×1.25	15	24	M20×1.5	Rc1/8	62	103
25	22	19.5	17	32	10	26 ⁰ _{-0.03}	13	10.5	8	45	6	8	33.5	5	M10×1.25	15	30	M26×1.5	Rc1/8	62	107
32	22	19.5	17	32	12	26 ⁰ _{-0.03}	13	10.5	8	45	6	8	37.5	5.5	M10×1.25	15	34.5	M26×1.5	Rc1/8	64	109
40	24	21	22	41	14	32 ⁰ _{-0.04}	16	13.5	11	50	8	10	46.5	7	M14×1.5	21.5	42.5	M32×2.0	Rc1/4	88	138

E



* FL: Effective thread length

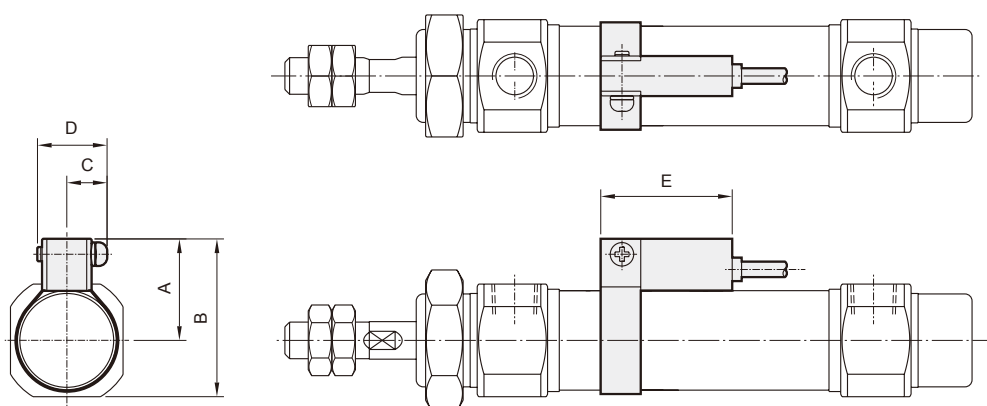
Unit: mm

Code Tube I.D.	A	AL	B1	B2	CD	CX	CI	D	E	F	FL	G	H	H1	I	K	L	MM	N	NA	NN	P	RR	S	U	Z	ZD
20	18	15.5	13	26	8	12	20	8	20 ⁰ _{-0.03}	13	10.5	8	41	5	28	5	12	M8×1.25	15	24	M20×1.5	Rc1/8	9	62	11.5	115	124
25	22	19.5	17	32	8	12	22	10	26 ⁰ _{-0.03}	13	10.5	8	45	6	33.5	5	12	M10×1.25	15	30	M26×1.5	Rc1/8	9	62	11.5	119	128
32	22	19.5	17	32	10	20	27	12	26 ⁰ _{-0.03}	13	10.5	8	45	6	37.5	5.5	15	M10×1.25	15	34.5	M26×1.5	Rc1/8	12	64	14.5	124	136
40	24	21	22	41	10	20	33	14	32 ⁰ _{-0.04}	16	13.5	11	50	8	46.5	7	15	M14×1.5	21.5	42.5	M32×2.0	Rc1/4	12	88	14.5	153	165

■ Installation of sensor switch

Sensor switch: RCM

Sensor switch band: BM**



Code Tube I.D.	A	B	C	D	E
20	22	34	10	16	28
25	25	40	10	16	28
32	28	46	10	16	28
40	32	54	10	16	28

■ Cylinder & accessories weight

Cylinder weight

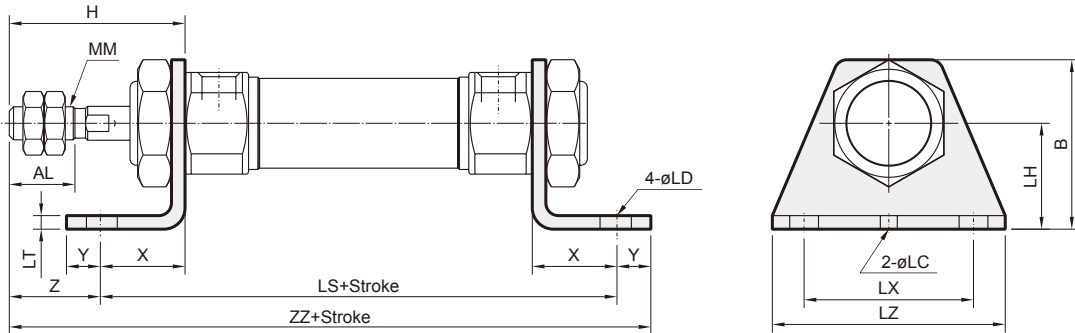
Unit: g

Model	Basic weight MCMB-11	Basic weight MCMB-11-N	Basic weight MCMB-11-E	Stroke 25 mm MCMB-11	Basic weight MCMB-11-A	Stroke 25 mm MCMB-11-A
Tube I.D.						
$\phi 20$	146	146	148	18	144	20
$\phi 25$	232	232	228	28	252	26
$\phi 32$	275	275	287	38	340	38
$\phi 40$	568	568	576	50	565	51

Accessories weight

Model	LB	CA	CB	FA/FB	SDB	TA/TB	Y	I	Pin	Rod nut	Cover nut
Tube I.D.											
$\phi 20$	122	53	-	66	62	-	53	-	13	4	19
$\phi 25$	129	63	-	73	62	-	49	62	13	8	23
$\phi 32$	129	63	-	73	140	-	49	62	13	8	23
$\phi 40$	207	162	-	124	140	-	-	164	43	16	50

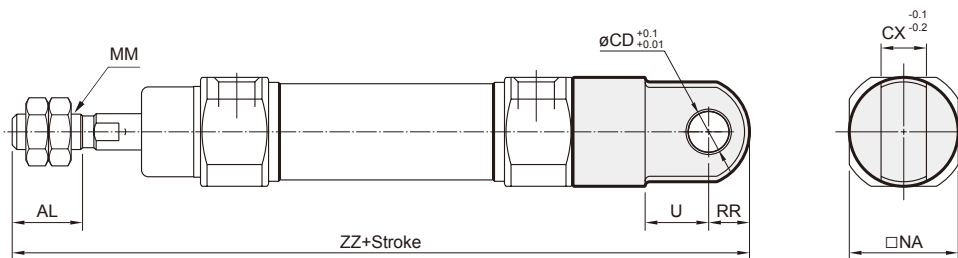
LB



Unit: mm

Code Tube I.D.	AL	B	H	LC	LD	LH	LS	LT	LX	LZ	MM	X	Y	Z	ZZ
20	15.5	40	41	4	6.8	25	102	3.2	40	55	M8×1.25	20	8	21	131
25	19.5	47	45	4	6.8	28	102	3.2	40	55	M10×1.25	20	8	25	135
32	19.5	47	45	4	6.8	28	104	3.2	40	55	M10×1.25	20	8	25	137
40	21	54	50	4	7	30	134	3.2	55	75	M14×1.5	23	10	27	171

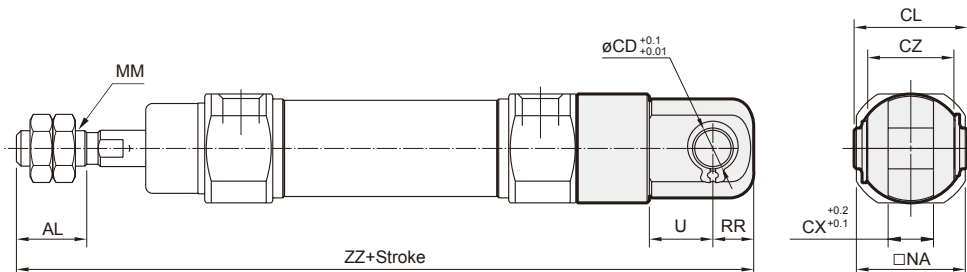
CA



Unit: mm

Code Tube I.D.	AL	CD	CX	MM	NA	RR	U	ZZ
20	15.5	9	10	M8×1.25	24	9	14	142
25	19.5	9	10	M10×1.25	30	9	14	146
32	19.5	9	10	M10×1.25	34.5	9	14	148
40	21	10	15	M14×1.5	42.5	11	18	188

CB

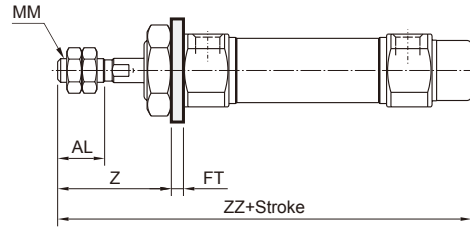
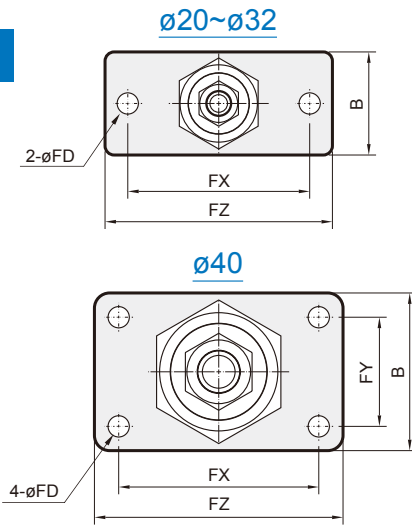


Unit: mm

Code Tube I.D.	AL	CD	CL	CX	CZ	MM	NA	RR	U	ZZ
20	15.5	9	25	10	19	M8×1.25	24	9	14	142
25	19.5	9	25	10	19	M10×1.25	30	9	14	146
32	19.5	9	25	10	19	M10×1.25	34.5	9	14	148
40	21	10	41.2	15	30	M14×1.5	42.5	11	18	188

MINIATURE CYLINDER

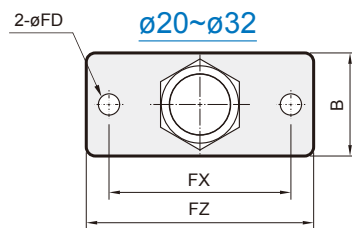
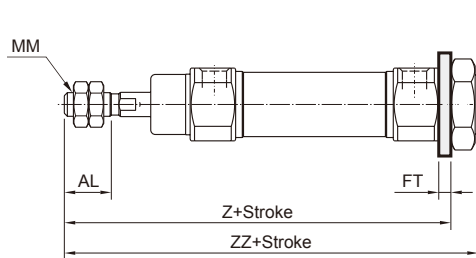
FA



Unit: mm

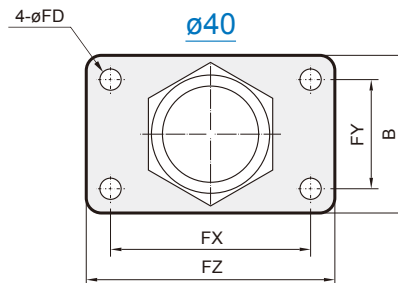
Code Tube I.D.	AL	B	FD	FT	FX	FY	FZ	MM	Z	ZZ
20	15.5	34	7	4	60	—	75	M8×1.25	37	116
25	19.5	40	7	4	60	—	75	M10×1.25	41	120
32	19.5	40	7	4	60	—	75	M10×1.25	41	122
40	21	52	7	5	66	36	82	M14×1.5	45	154

FB

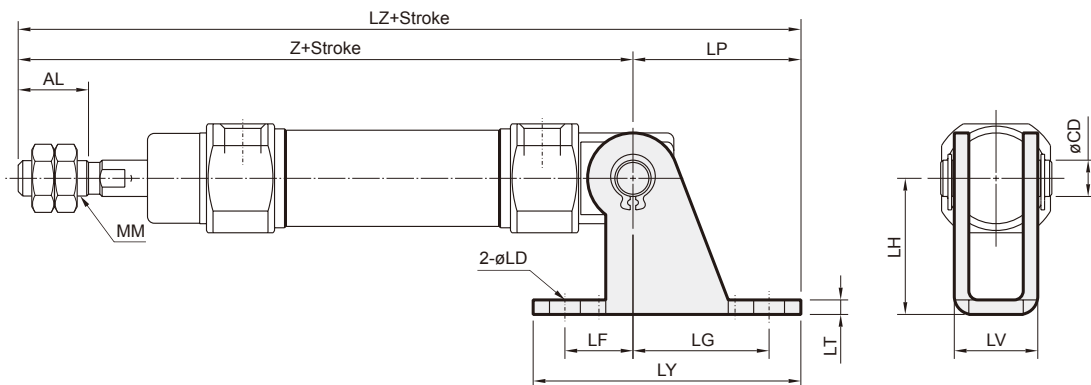


Unit: mm

Code Tube I.D.	AL	B	FD	FT	FX	FY	FZ	MM	Z	ZZ
20	15.5	34	7	4	60	—	75	M8×1.25	107	116
25	19.5	40	7	4	60	—	75	M10×1.25	111	120
32	19.5	40	7	4	60	—	75	M10×1.25	113	122
40	21	52	7	5	66	36	82	M14×1.5	143	154



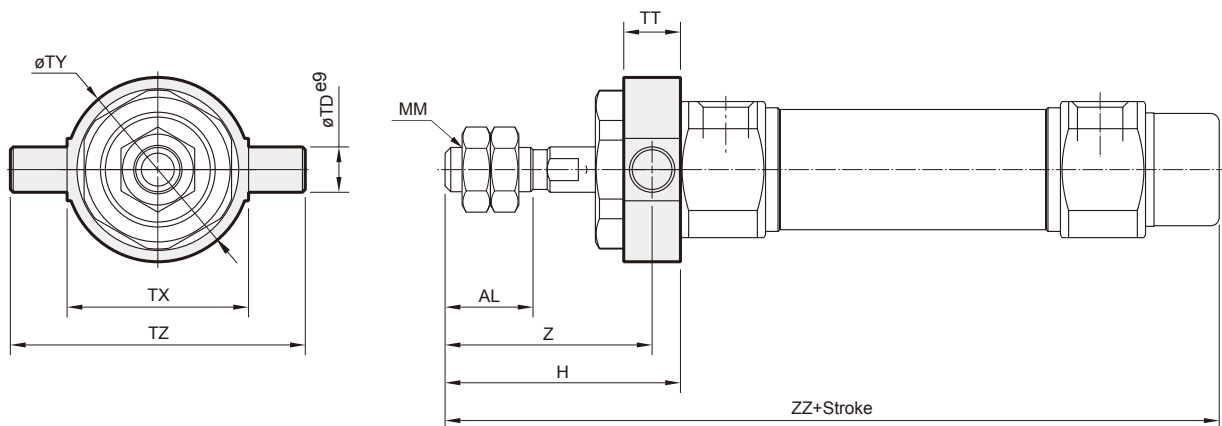
SDB



Unit: mm

Code Tube I.D.	AL	CD	LD	LF	LG	LH	LP	LT	LV	LY	LZ	MM	N	Z
20	15.5	8	6.8	15	30	30	37	3.2	18.4	59	152	M8×1.25	15	115
25	19.5	8	6.8	15	30	30	37	3.2	18.4	59	156	M10×1.25	15	119
32	19.5	10	9	15	40	40	50	4	28	75	174	M10×1.25	15	124
40	21	10	9	15	40	40	50	4	28	75	203	M14×1.5	21.5	153

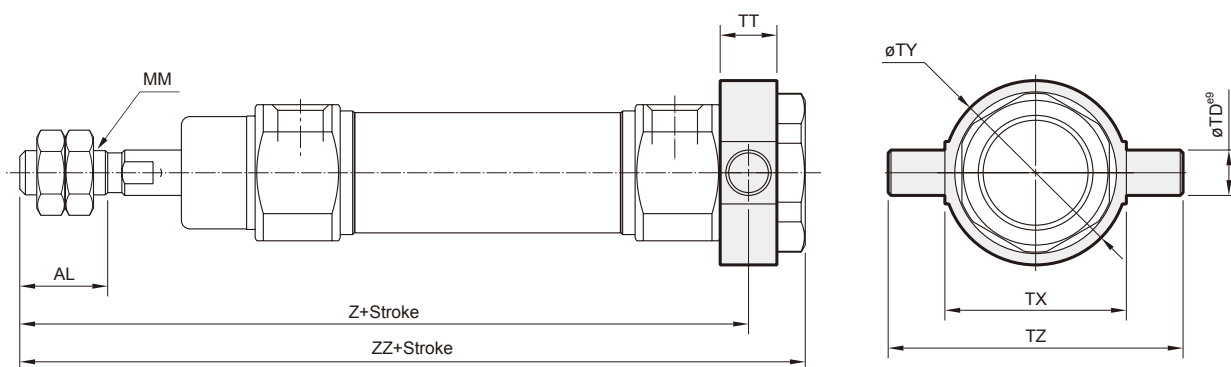
TA



Unit: mm

Code Tube I.D.	AL	H	MM	TD	TT	TX	TY	TZ	Z	ZZ
20	15.5	41	M8×1.25	8	10	32	32.5	52	36	116
25	19.5	45	M10×1.25	9	10	40	40.5	60	40	120
32	19.5	45	M10×1.25	9	10	40	40.5	60	40	122
40	21	50	M14×1.5	10	11	53	53.5	77	44.5	154

TB



Unit: mm

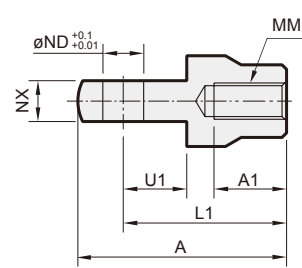
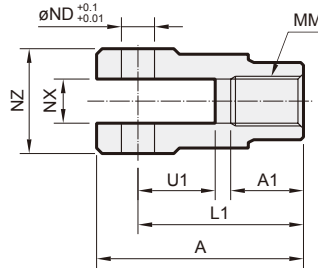
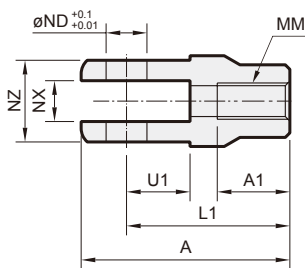
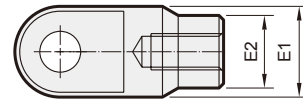
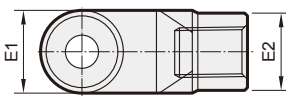
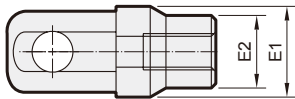
Code Tube I.D.	AL	MM	TD	TT	TX	TY	TZ	Z	ZZ
20	15.5	M8×1.25	8	10	32	32.5	52	108	118
25	19.5	M10×1.25	9	10	40	40.5	60	112	122
32	19.5	M10×1.25	9	10	40	40.5	60	114	124
40	21	M14×1.5	10	11	53	53.5	77	143.5	154

Y connector

I connector

$\phi 20 \sim \phi 32$

$\phi 40$



Unit: mm

Code Tube I.D.	A	A1	E1	E2	L1	MM	ND	NX	NZ	U1
20	46	16	$\phi 20$	$\phi 16$	36	M8 \times 1.25	9	9 ^{+0.2} / _{+0.1}	18	14
25, 32	46	16	$\phi 20$	$\phi 16$	36	M10 \times 1.25	9	9 ^{+0.2} / _{+0.1}	18	14
40	68	25	$\phi 26$	$\phi 24$	55	M14 \times 1.5	12	16 ^{+0.3} / _{+0.1}	38	25

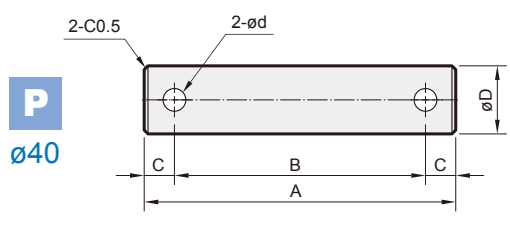
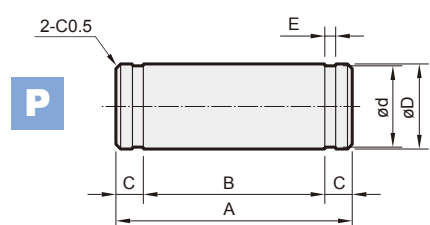
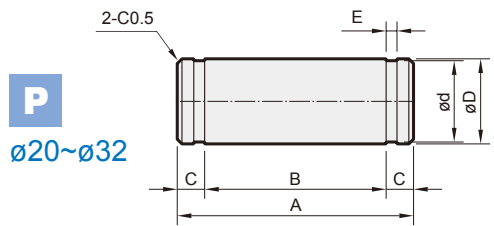
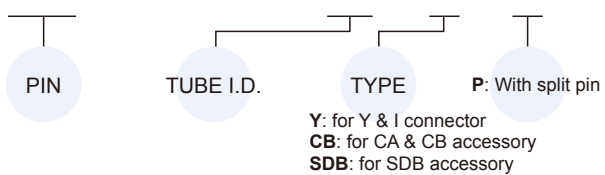
Unit: mm

Code Tube I.D.	A	A1	E1	E2	L1	MM	ND	NX	U1
20	46	16	$\phi 20$	$\phi 16$	36	M8 \times 1.25	9	9 ^{+0.1} / _{+0.2}	14
25, 32	46	16	$\phi 20$	$\phi 16$	36	M10 \times 1.25	9	9 ^{+0.1} / _{+0.2}	14
40	69	22	$\phi 24$	—	55	M14 \times 1.5	12	16 ^{+0.1} / _{+0.2}	20

PIN

Order example

PIN — MCMB — 32 — Y — P



for SDB

Code Tube I.D.	A	B	C	ϕD^{d9}	ϕd	E	Snap ring
20~25	24.5	19.5	2.5	8 ^{-0.04} / _{-0.08}	7.6 ⁰ / _{-0.06}	0.9 ^{+0.10} / ₀	STW-8
32~40	34	29	2.5	10 ^{-0.04} / _{-0.08}	9.6 ⁰ / _{-0.09}	1.15 ^{+0.14} / ₀	STW-9

for CB & Y connector

Code Tube I.D.	A	B	C	ϕD^{d9}	ϕd	E	Snap ring Split pin
20~32-CB, Y	25	19.2	2.9	9 ^{-0.04} / _{-0.08}	8.6 ⁰ / _{-0.06}	1.15 ^{+0.14} / ₀	STW-9
40-CB	41.2	33.2	4	10 ^{-0.04} / _{-0.08}	3.2	—	$\phi 3.2 \times 20L$
40-Y	49.7	41.7	4	12 ^{-0.05} / _{-0.09}	3.2	—	$\phi 3.2 \times 20L$