



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			
	20	25	32	40
Tube I.D. (mm)	20	25	32	40
Port size	Rc1/8			Rc1/4
Medium	Air			
Max operating pressure	1 MPa			
Min operating pressure	0.05 MPa			
Proof pressure	1.5 MPa			
Ambient temperature	-5~+60°C (No freezing)			
Lubricator	Not required			
Available speed range	50~500mm/sec			
Sensor switch (※)	RCA, RCM			
Sensor switch band	BA20	BA25	BA32	BA40
	BGS20	BGS25	BGS32	BGS40
	BM20	BM25	BM32	BM40

Table for standard stroke

Tube I.D.	Stroke (mm)
φ 20, 25, 32, 40	25, 50, 75, 100, 125, 150, 200, 250, 300

Order example

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

MODEL

TUBE I.D.

Blank: With cushion pad
A: With adjustable cushion

PORT THREAD
Blank: Rc thread
G: G thread
NPT: NPT thread

1: Single Rod
2: Double Rod

STROKE

END COVER TYPE

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

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

※ Single acting type Please consult us.

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

Mounting accessories

LB-MCMB-20

MODEL

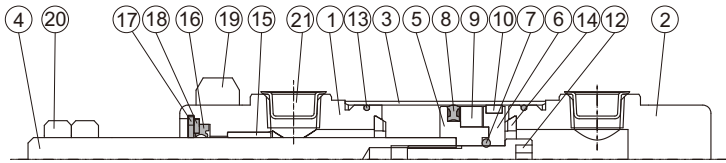
TUBE I.D.

MOUNTING TYPE

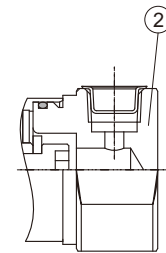
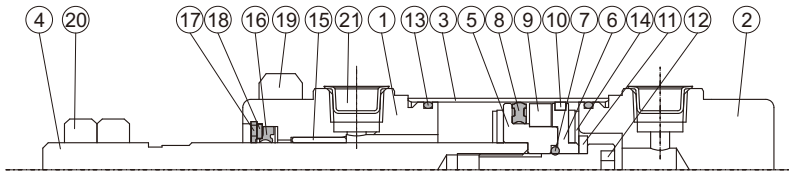
	LB
	CA
	CB
	FA
	FB
	SDB
	TA
	TB
	Y
	I

for end cover "E" type

φ 20, φ 40

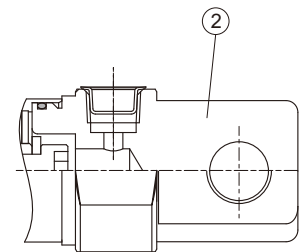
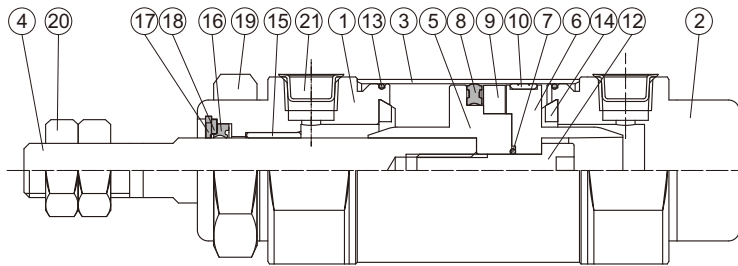


φ 25



N type: φ 20~φ 40

φ 32



E type: φ 20~φ 40

Material

No.	Part name	Tube I.D.				Q'y		Componentn parts (inclusion)		Repair kits (inclusion)
		20	25	32	40	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	Washer	—	※1	—	1	—	●			
12	Piston bolt	SCM				1	—	●		
13	Cover ring	NBR				2	2	●	●	
14	Cushion gasket	NBR				2	2	●	●	
15	Rod bush	Bearing alloy				1	2	●	●	
16	Rod packing	NBR				1	2	●	●	●
17	Snap ring	Spring steel				1	2	●	●	
18	Washer	Carbon steel				1	2	●	●	
19	Tie nut	Carbon steel				1	2	●	●	
20	Rod front nut	Carbon steel				2	2	●	●	
21	Port plug	Plastic				2	2	●	●	

※1. Carbon steel

Order example of component parts / repair kits

Tube I.D.	Component parts	Repair kits
φ 20	CP-MCMB-20	PS-MCMB-20
φ 25	CP-MCMB-25	PS-MCMB-25
φ 32	CP-MCMB-32	PS-MCMB-32
φ 40	CP-MCMB-40	PS-MCMB-40

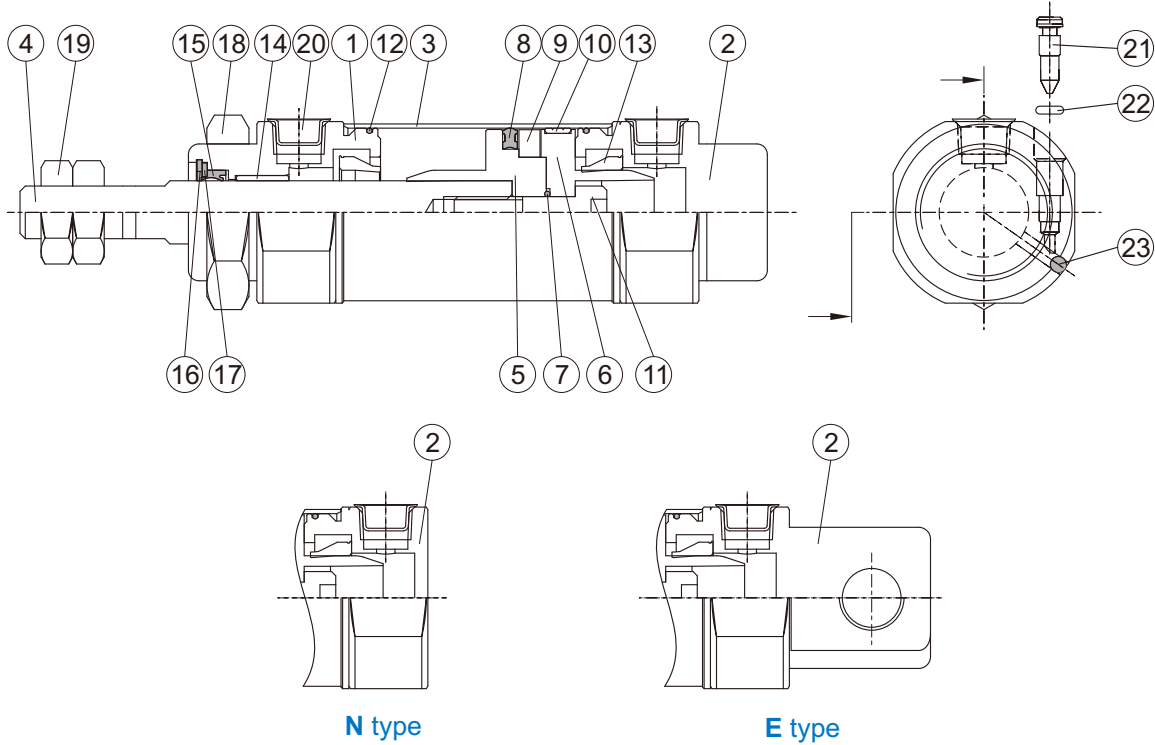
Non-pivot type (end-plain)

Tube I.D.	Component parts
φ 20	CP-MCMB-20-N
φ 25	CP-MCMB-25-N
φ 32	CP-MCMB-32-N
φ 40	CP-MCMB-40-N

Pivot type

Tube I.D.	Component parts
φ 20	CP-MCMB-20-E
φ 25	CP-MCMB-25-E
φ 32	CP-MCMB-32-E
φ 40	CP-MCMB-40-E

MINIATURE CYLINDERS



Material

No.	Part name	Tube I.D.				Q'y		Component parts (inclusion)		Repair kits (inclusion)
		20	25	32	40	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 of component parts / repair kits

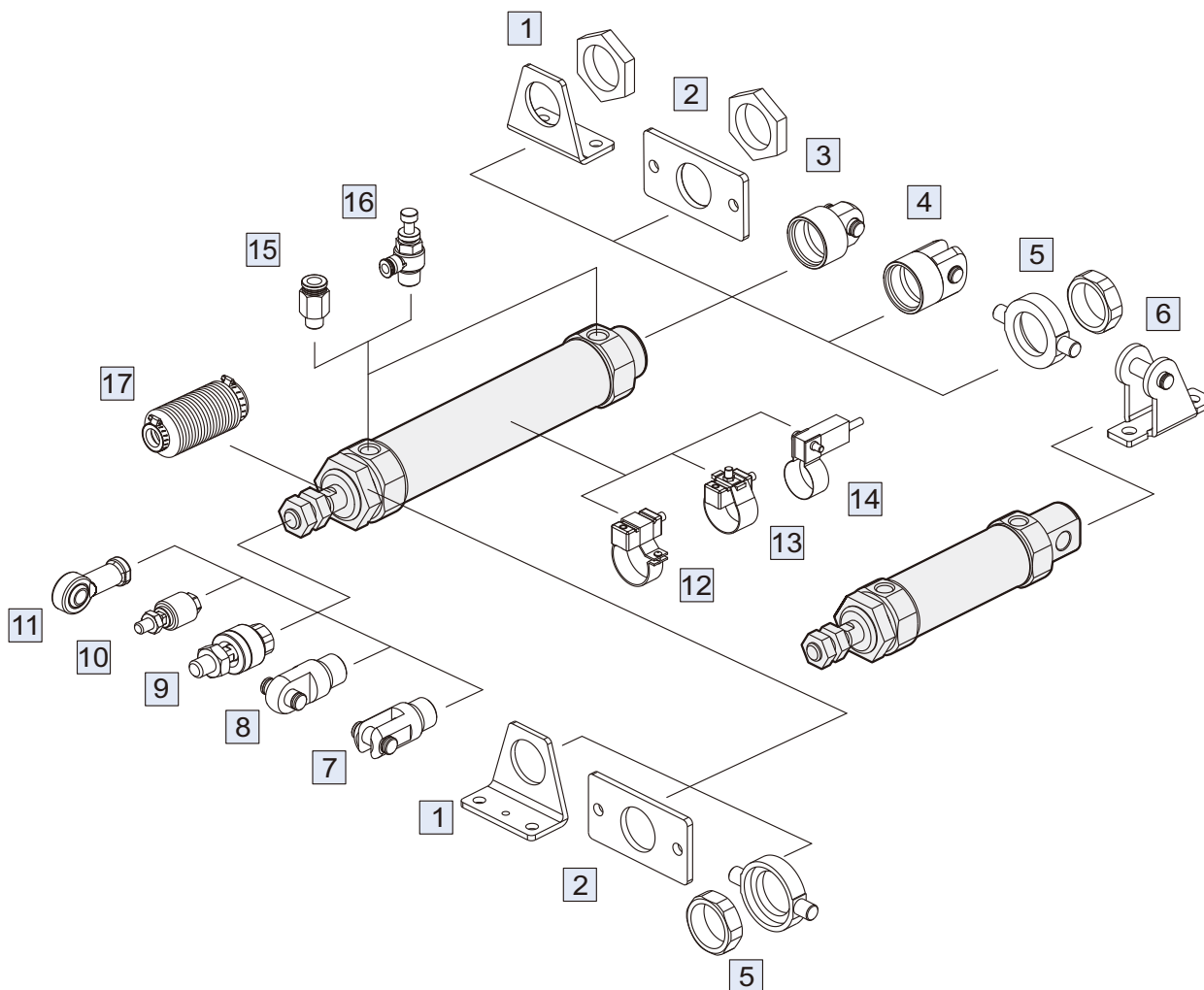
Tube I.D.	Component parts	Repair kits
φ 20	CP-MCMB-20A	PS-MCMB-20A
φ 25	CP-MCMB-25A	PS-MCMB-25A
φ 32	CP-MCMB-32A	PS-MCMB-32A
φ 40	CP-MCMB-40A	PS-MCMB-40A

Non-pivot type (end-plain)

Tube I.D.	Component parts
φ 20	CP-MCMB-20A-N
φ 25	CP-MCMB-25A-N
φ 32	CP-MCMB-32A-N
φ 40	CP-MCMB-40A-N

Pivot type

Tube I.D.	Component parts
φ 20	CP-MCMB-20A-E
φ 25	CP-MCMB-25A-E
φ 32	CP-MCMB-32A-E
φ 40	CP-MCMB-40A-E

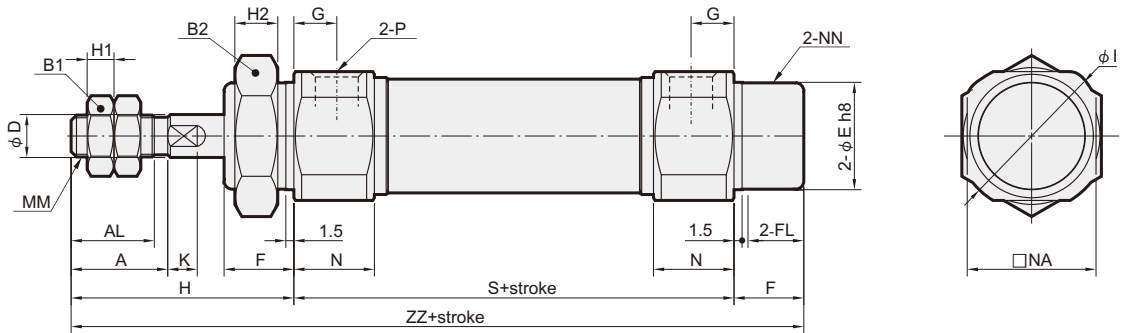


No.	Accessories	Page
1	Mounting accessories LB	L-22
2	Mounting accessories FA/FB	L-23
3	Mounting accessories CA+PIN	L-22,25
4	Mounting accessories CB+PIN	L-22,25
5	Mounting accessories TA/TB	L-24
6	Mounting accessories SDB+PIN (※)	L-23,25
7	Accessories Y+PIN	L-25
8	Accessories I+PIN	L-25

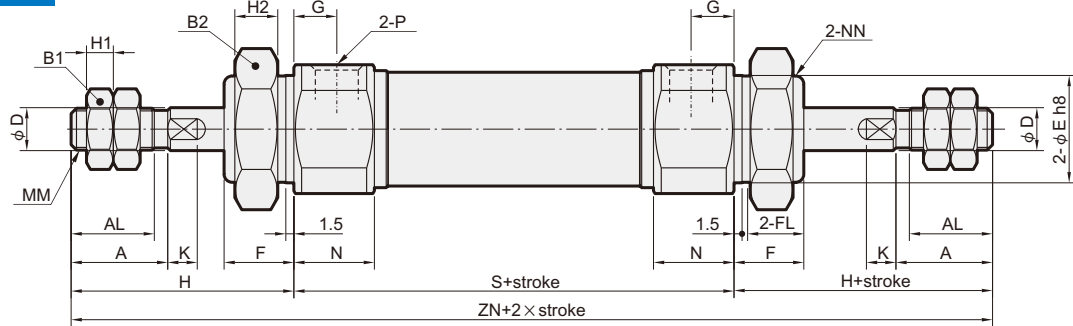
※ Only for end cover "E" type

No.	Accessories	Page
9	Floating joint MFC	V-01
10	Floating joint MFCS	V-03
11	Female rod ends PHS	V-04
12	Sensor switch RCA+BGS**	V-05
13	Sensor switch RCA+BA**	V-05
14	Sensor switch RCM+BM**	V-11
15	Fitting PC (PISCO)	H-03
16	Speed controller JSC (PISCO)	H-14
17	Protective bellows kit	—

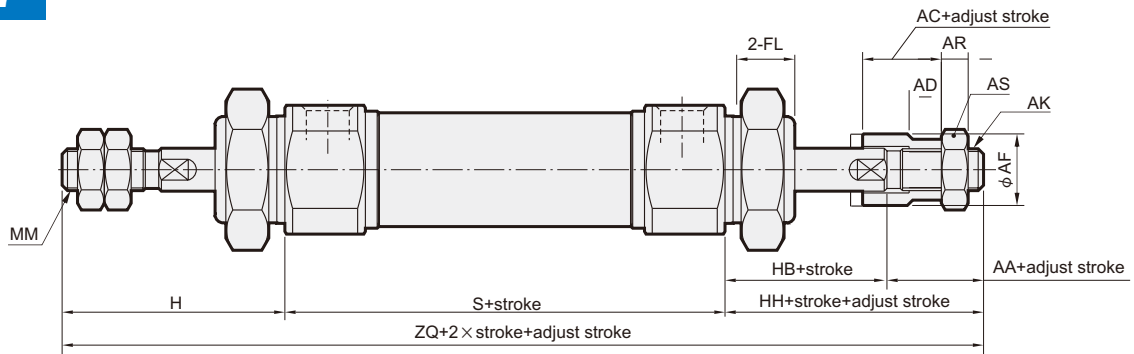
11



21



27



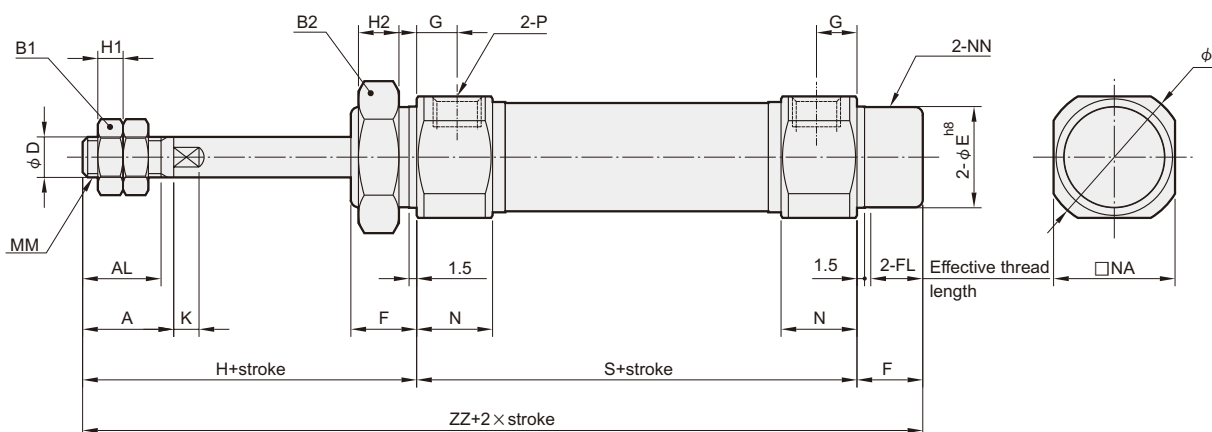
(mm)

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 ^{0.03} _{-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 ^{0.03} _{-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 ^{0.03} _{-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 ^{0.04} _{-0.04}	16	13.5	11	50	8	10	23	40	46.5	7	M14×1.5

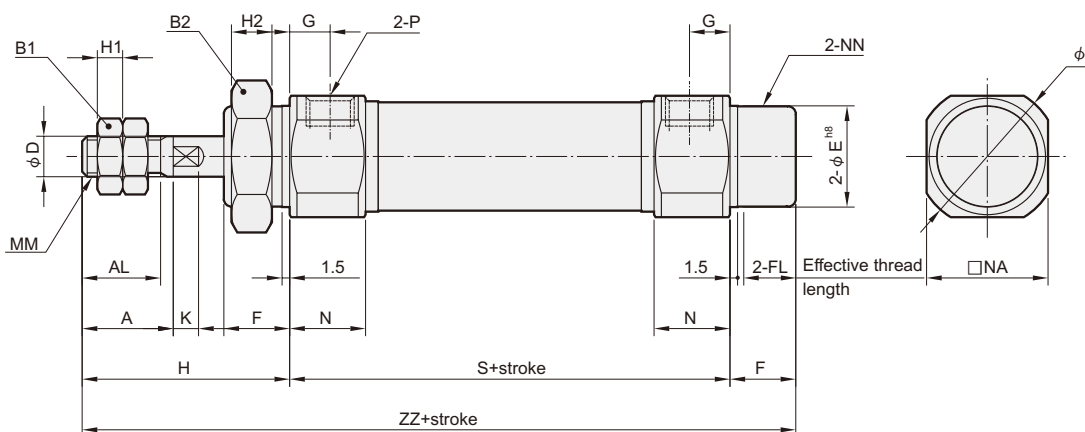
Code Tube I.D.	N	NA	NN	P	S	ZN	ZQ	ZZ
20	15	24	M20×1.5	Rc1/8	62	144	141	116
25	15	30	M26×1.5	Rc1/8	62	152	146	120
32	15	34.5	M26×1.5	Rc1/8	64	154	145	122
40	21.5	42.5	M32×2.0	Rc1/4	88	188	178	154

※ FL (Effective thread length)

13



15

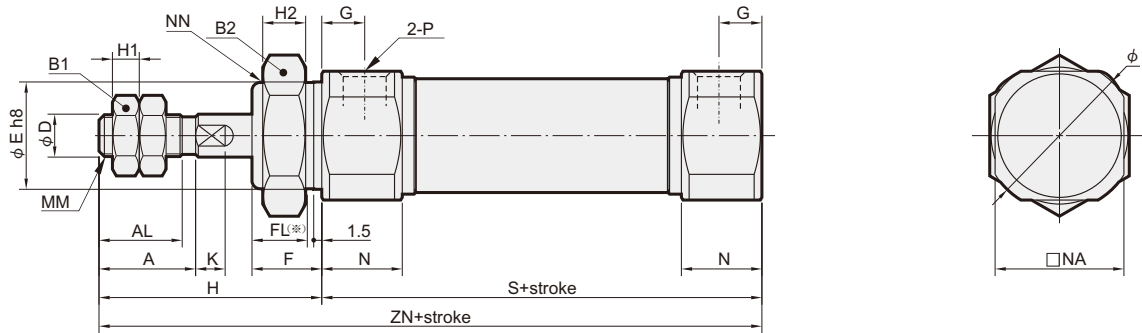


Code Tube I.D.	A	AL	B1	B2	D	E	F	FL	G	H	H1	H2	I	K	MM	N	NA	NN	P
20	18	15.5	13	26	8	20 ⁰ _{0.03}	13	10.5	8	41	5	8	28	5	M8×1.25	15	24	M20×1.5	Rc1/8
25	22	19.5	17	32	10	26 ⁰ _{0.03}	13	10.5	8	45	6	8	33.5	5	M10×1.25	15	30	M26×1.5	Rc1/8
32	22	19.5	17	32	12	26 ⁰ _{0.03}	13	10.5	8	45	6	8	37.5	5.5	M10×1.25	15	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 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

MINIATURE CYLINDERS

N

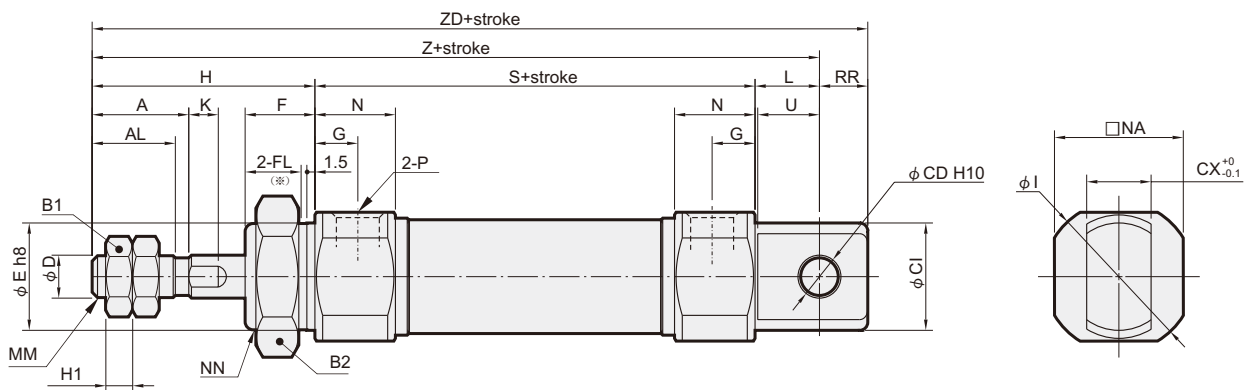


(※) Effective thread length

(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



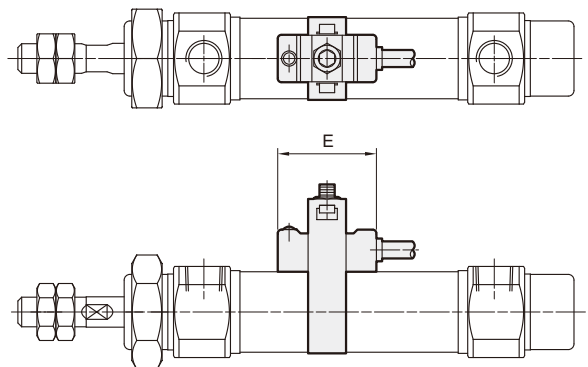
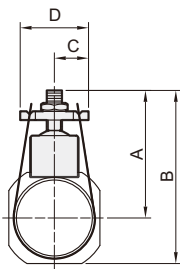
(※) Effective thread length

(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

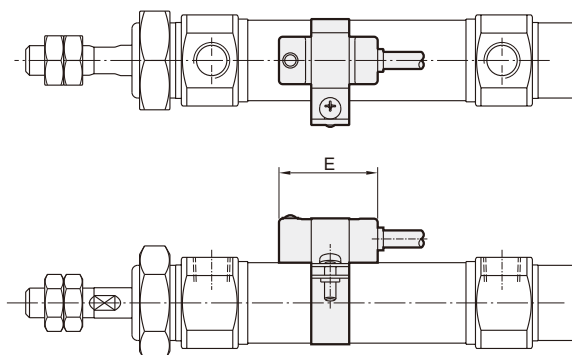
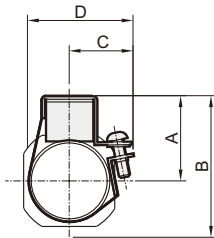
Sensor switch: RCA
Sensor switch band: BA**

Code Tube I.D.	A	B	C	D	E
20	33	45	9	18	26
25	35.5	50.5	9	18	26
32	39	56.5	9	18	26
40	43	64.5	9	18	26



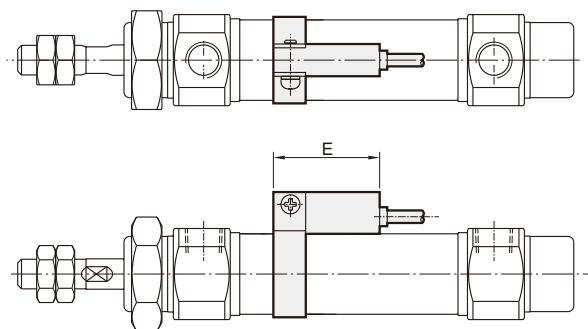
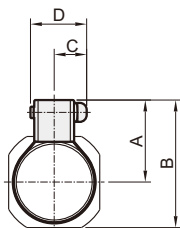
Sensor switch: RCA
Sensor switch band: BGS**

Code Tube I.D.	A	B	C	D	E
20	25	37	18	30	26
25	25.5	40.5	18.5	33.5	26
32	29	46.5	22	39.5	26
40	33	55	26	47.5	26

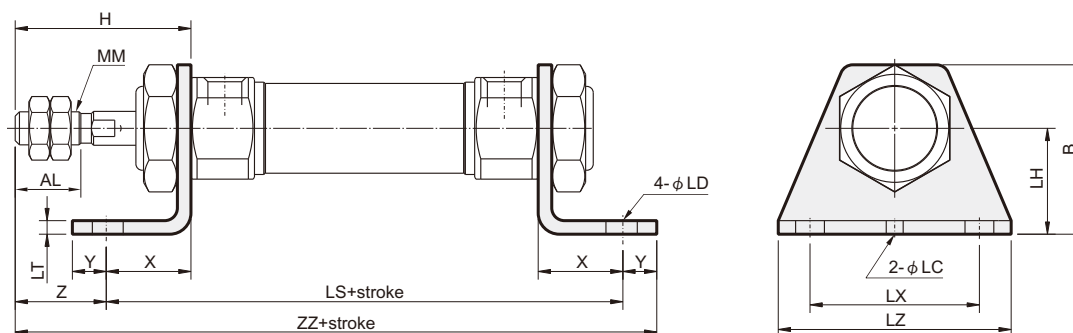


Sensor switch: RCM
Sensor switch band: BM**

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



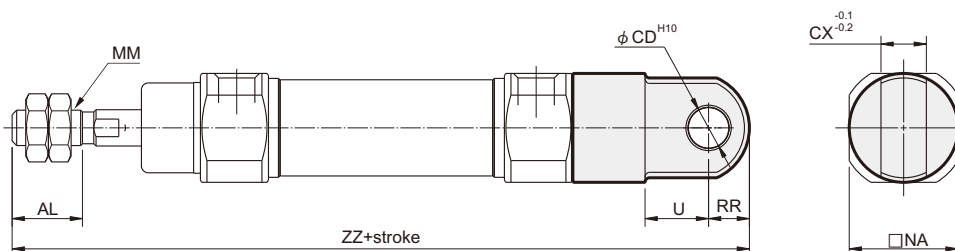
LB



(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

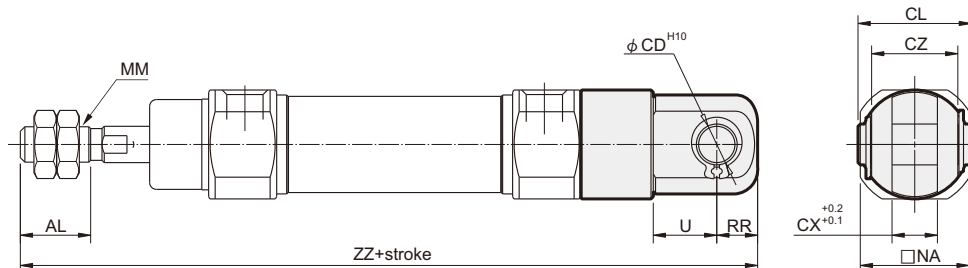
CA



(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



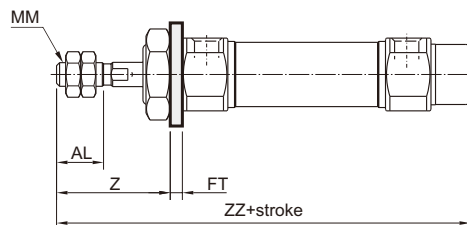
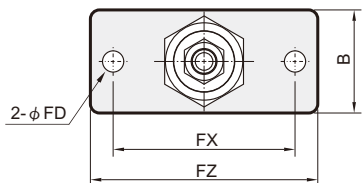
(mm)

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

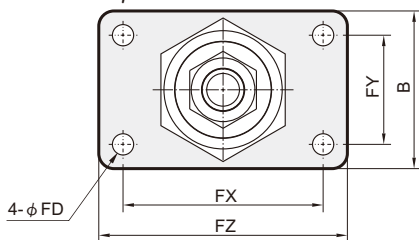
MINIATURE CYLINDERS

FA

$\phi 20 \sim \phi 32$

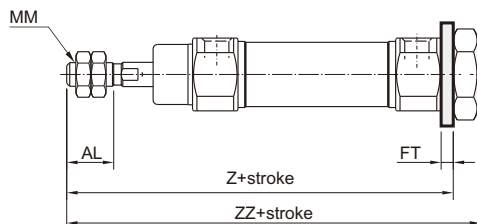


$\phi 40$

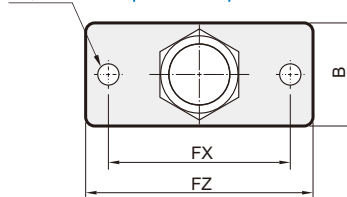


Code Tube I.D.	AL	B	FD	FT	FX	FY	FZ	MM	Z	ZZ
20	15.5	34	7	4	60	-	75	M8×1.25	37	116
25	19.5	40	7	4	60	-	75	M10×1.25	41	120
32	19.5	40	7	4	60	-	75	M10×1.25	41	122
40	21	52	7	5	66	36	82	M14×1.5	45	154

FB

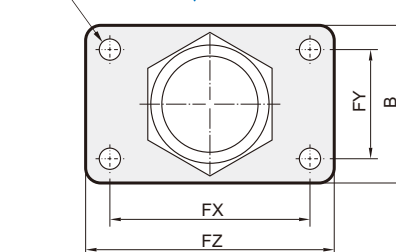


$\phi 20 \sim \phi 32$

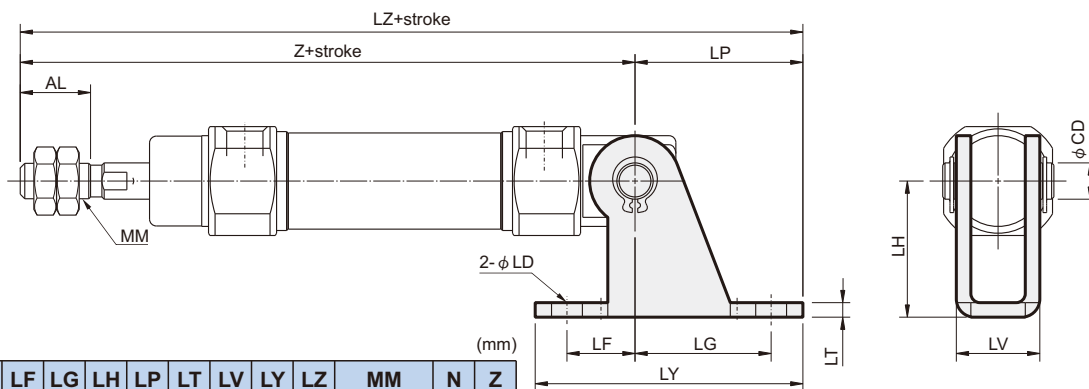


Code Tube I.D.	AL	B	FD	FT	FX	FY	FZ	MM	Z	ZZ
20	15.5	34	7	4	60	-	75	M8×1.25	107	116
25	19.5	40	7	4	60	-	75	M10×1.25	111	120
32	19.5	40	7	4	60	-	75	M10×1.25	113	122
40	21	52	7	5	66	36	82	M14×1.5	143	154

$\phi 40$

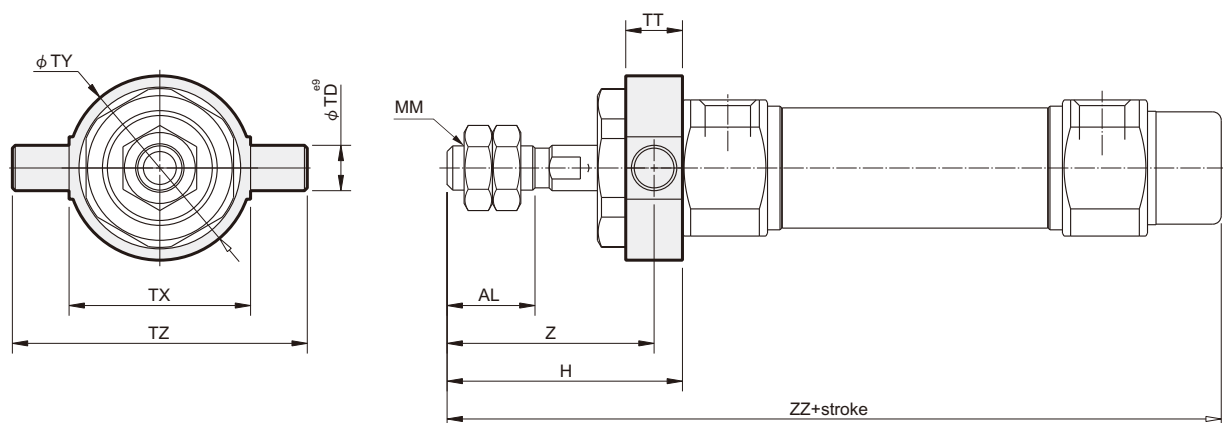


SDB



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

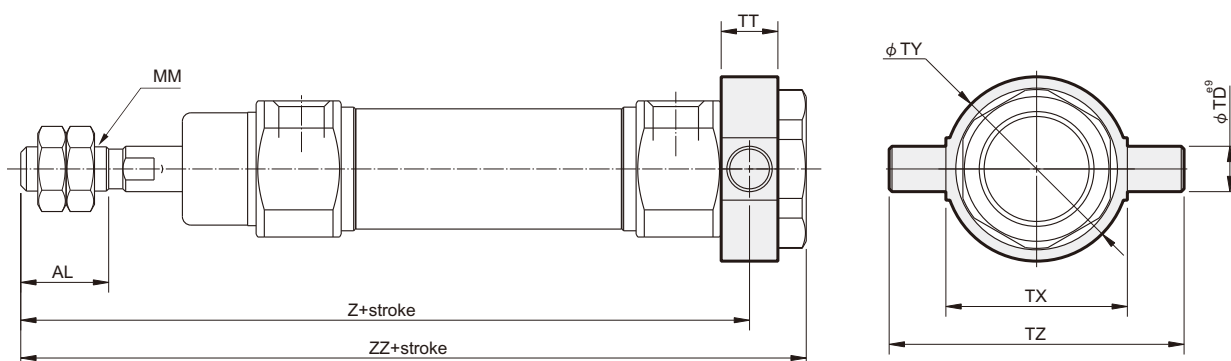
TA



(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



(mm)

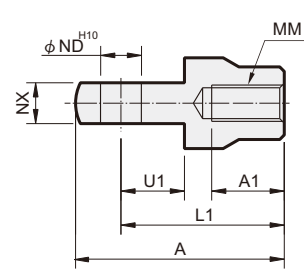
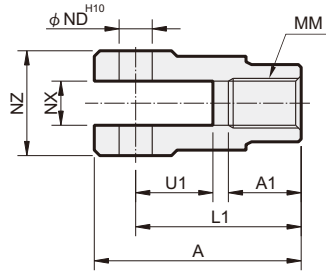
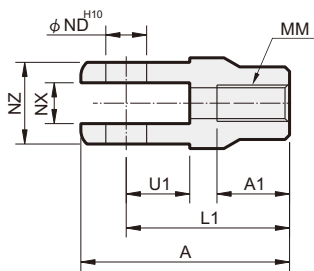
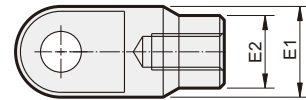
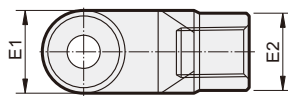
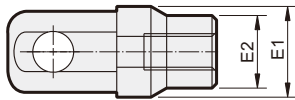
Code Tube I.D.	AL	MM	TD	TT	TX	TY	TZ	Z	ZZ
20	15.5	M8×1.25	8	10	32	32.5	52	108	118
25	19.5	M10×1.25	9	10	40	40.5	60	112	122
32	19.5	M10×1.25	9	10	40	40.5	60	114	124
40	21	M14×1.5	10	11	53	53.5	77	143.5	154

MINIATURE CYLINDERS

Y connector

$\phi 20 \sim \phi 32$

$\phi 40$



(mm)

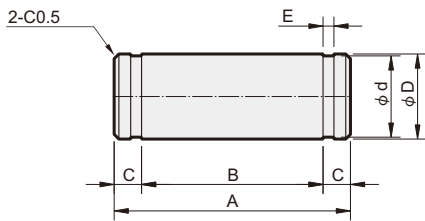
Code Tube I.D.	A	A1	E1	E2	L1	MM	ND	NX	NZ	U1
20	46	16	$\phi 20$	$\phi 16$	36	M8 \times 1.25	9	$9^{+0.2}_{+0.1}$	18	14
25, 32	46	16	$\phi 20$	$\phi 16$	36	M10 \times 1.25	9	$9^{+0.2}_{+0.1}$	18	14
40	68	25	$\phi 24$	$\phi 24$	55	M14 \times 1.5	12	$16^{+0.3}_{+0.1}$	38	25

(mm)

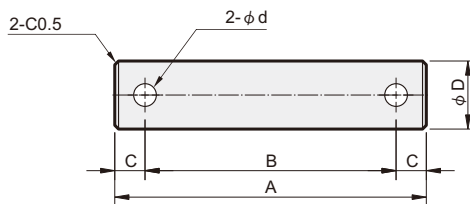
Code Tube I.D.	A	A1	E1	E2	L1	MM	ND	NX	U1
20	46	16	$\phi 20$	$\phi 16$	36	M8 \times 1.25	9	$9^{+0.1}_{+0.2}$	14
25, 32	46	16	$\phi 20$	$\phi 16$	36	M10 \times 1.25	9	$9^{+0.1}_{+0.2}$	14
40	69	22	$\phi 24$	$\phi 24$	55	M14 \times 1.5	12	$16^{+0.1}_{+0.2}$	20

Pin

$\phi 20 \sim \phi 32$

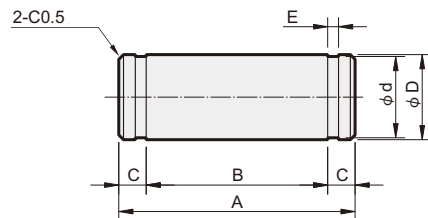
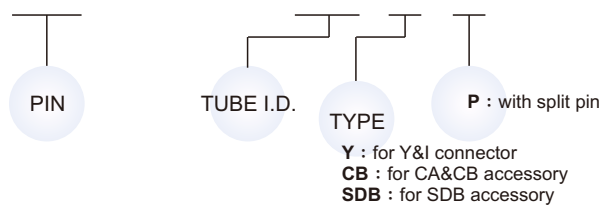


$\phi 40$



Order example

PIN – MCMB – 32 – Y – P



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		$\phi 3.2 \times 20L$

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