



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

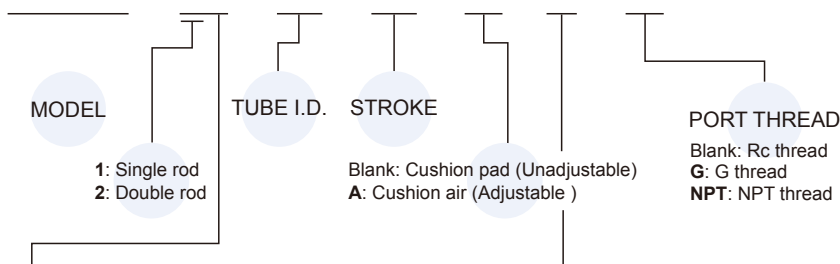
Model		MCMB			
Tube I.D.		20	25	32	40
Port size		Rc1/8			Rc1/4
Medium		Air			
Max. operating pressure		1 MPa			
Min. operating pressure	Double acting	0.05 MPa			
	Single acting	Extended: 0.23, Returned: 0.18 MPa			
Proof pressure		1.5 MPa			
Ambient temperature		-5~+60°C (No freezing)			
Lubricator		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



STYLE

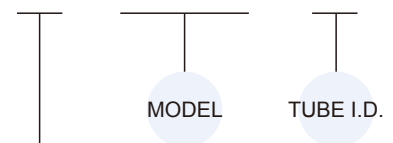
Code	Symbol	Description
1 1		Double acting / Male thread
1 3		Single acting / Normally extended male thread
1 5		Single acting / Normally returned male thread
2 1		Double rod / Male thread
2 7		Double rod / Adjustable male thread Please mark "adjustable distance(mm)" at order list

END COVER TYPE

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

Mounting accessories

LB - MCMB - 20



MOUNTING TYPE

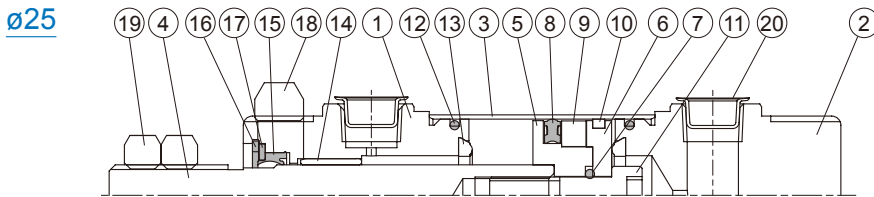
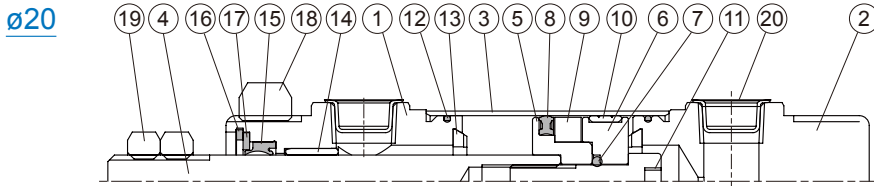
	LB
	CA
	CB
	FA
	FB
	SDB
	TA
	TB
	Y
	I

for end cover "E" type

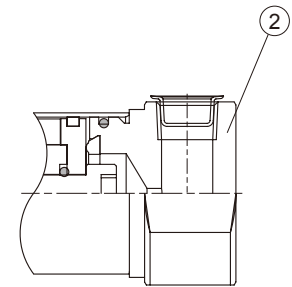
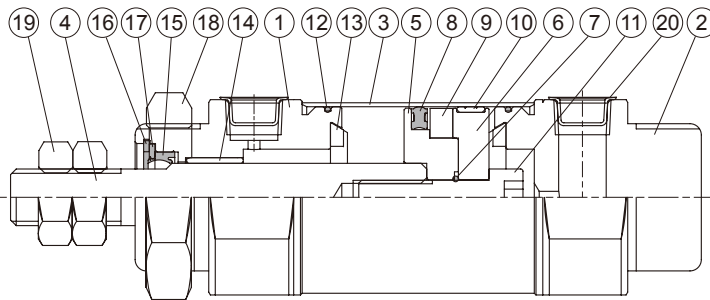
* Single acting type, please consult us.

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

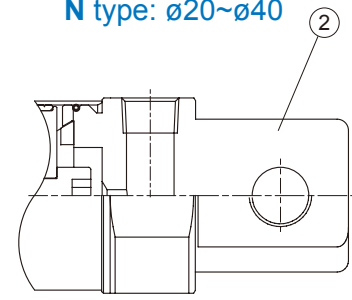
MINIATURE CYLINDER



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)

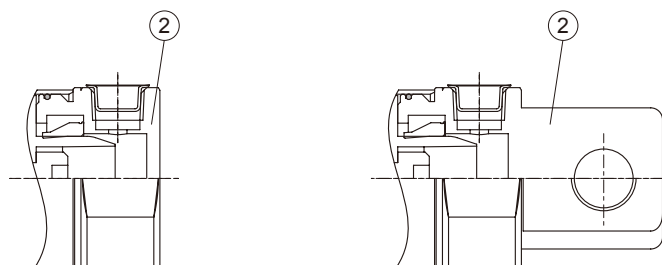
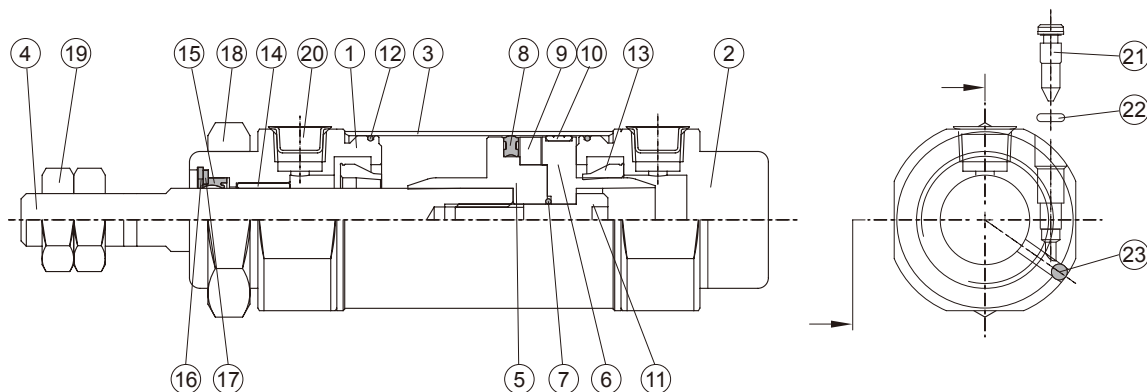
Tube I.D.	Component parts
ø20	CP-MCMB-20-N
ø25	CP-MCMB-25-N
ø32	CP-MCMB-32-N
ø40	CP-MCMB-40-N

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

MINIATURE CYLINDER

mindman



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

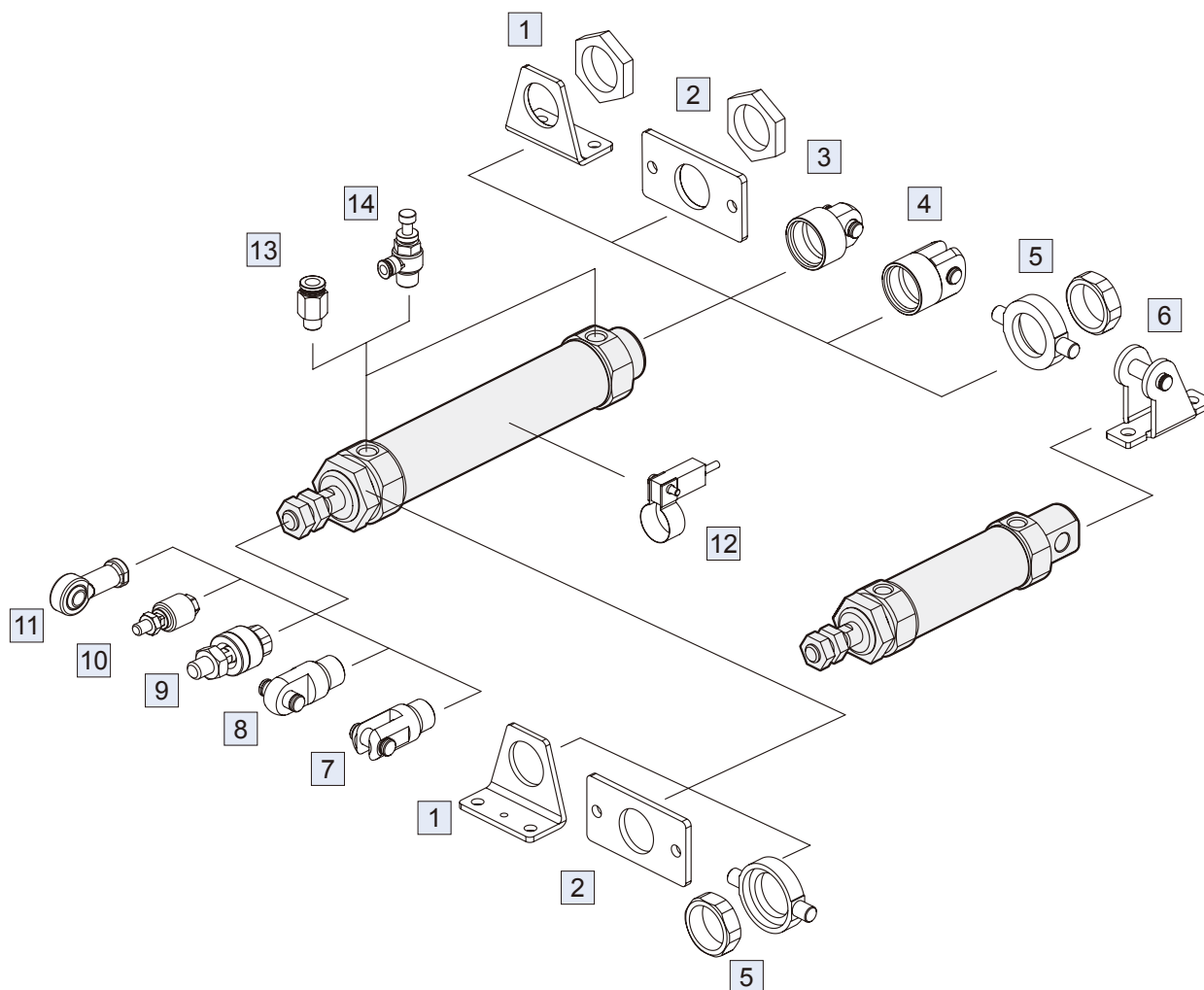
Tube I.D.	Component parts	Repair kits
ø20	CP-MCMB-20A	PS-MCMB-20A
ø25	CP-MCMB-25A	PS-MCMB-25A
ø32	CP-MCMB-32A	PS-MCMB-32A
ø40	CP-MCMB-40A	PS-MCMB-40A

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

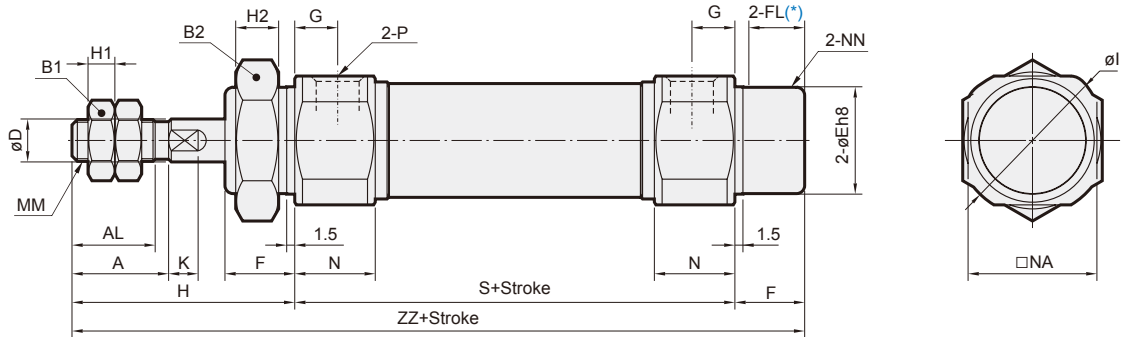
No.	Accessories	Page
9	Floating joint MFC	8-2
10	Floating joint MFCS	8-4
11	Female rod ends PHS	8-5
12	Sensor switch RCM+BM**	8-13
13	Fitting PC (PISCO)	8-5 (Vol.1)
14	Speed controller JSC (PISCO)	8-18 (Vol.1)

* Only for end cover "E" type.

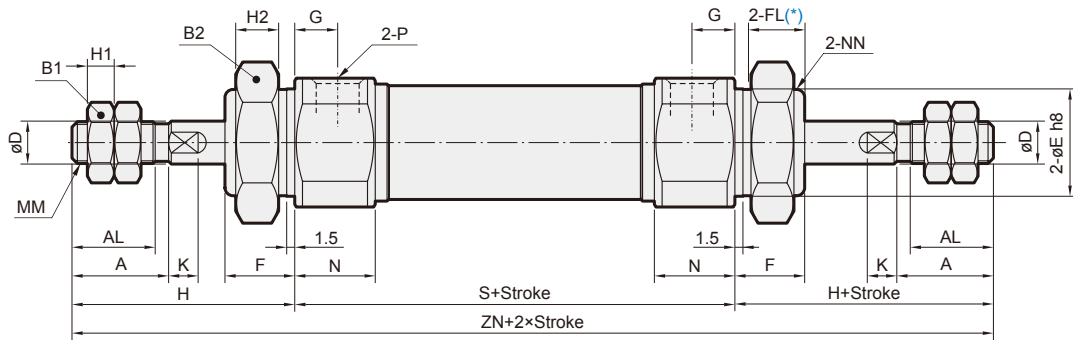
MINIATURE CYLINDER

Mindman

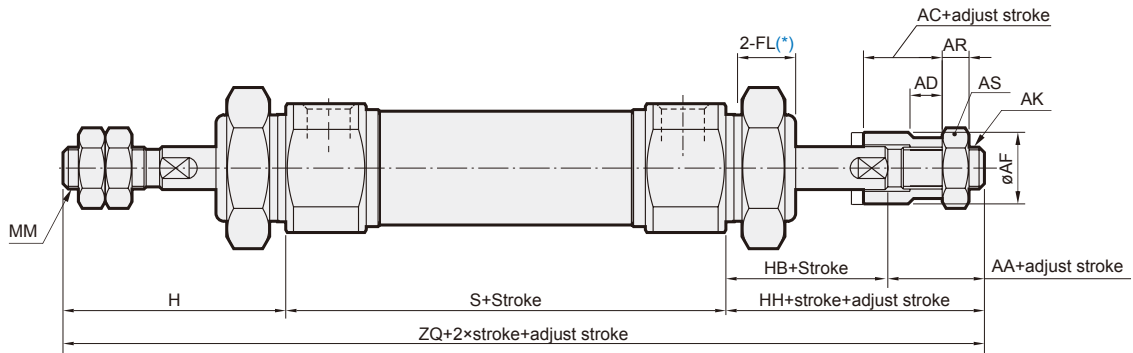
11



21



27



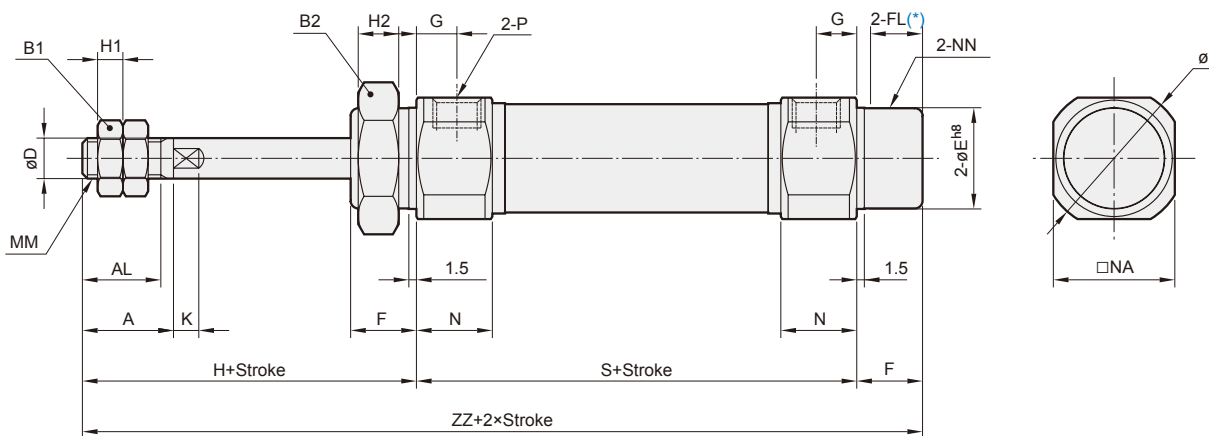
Unit: mm

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

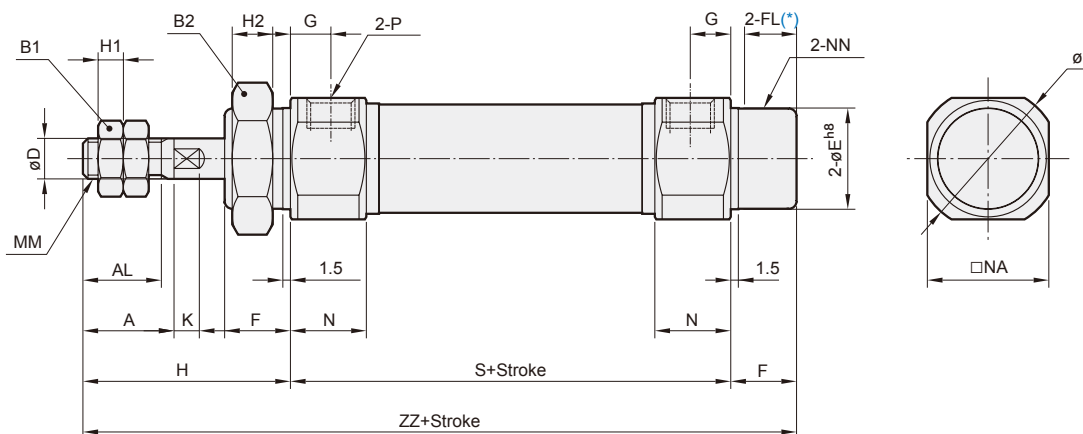
Code Tube I.D.	N	NA	NN	P	S	ZN	ZQ	ZZ
20	15	24	M20×1.5	Rc1/8	62	144	141	116
25	15	30	M26×1.5	Rc1/8	62	152	146	120
32	15	34.5	M26×1.5	Rc1/8	64	154	145	122
40	21.5	42.5	M32×2.0	Rc1/4	88	188	178	154

* FL: Effective thread length

13



15

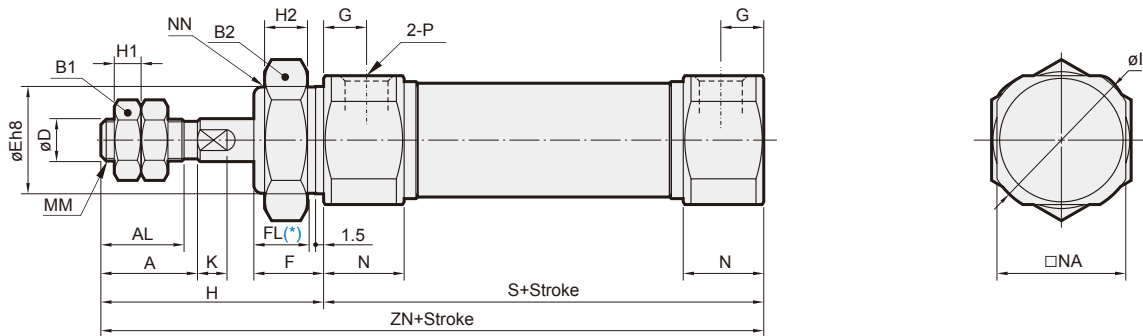


Code Tube I.D.	A	AL	B1	B2	D	E	F	FL	G	H	H1	H2	I	K	MM	N	NA	NN	P
20	18	15.5	13	26	8	20 ₀ ^{0.03}	13	10.5	8	41	5	8	28	5	M8×1.25	15	24	M20×1.5	Rc1/8
25	22	19.5	17	32	10	26 ₀ ^{0.03}	13	10.5	8	45	6	8	33.5	5	M10×1.25	15	30	M26×1.5	Rc1/8
32	22	19.5	17	32	12	26 ₀ ^{0.03}	13	10.5	8	45	6	8	37.5	5.5	M10×1.25	15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

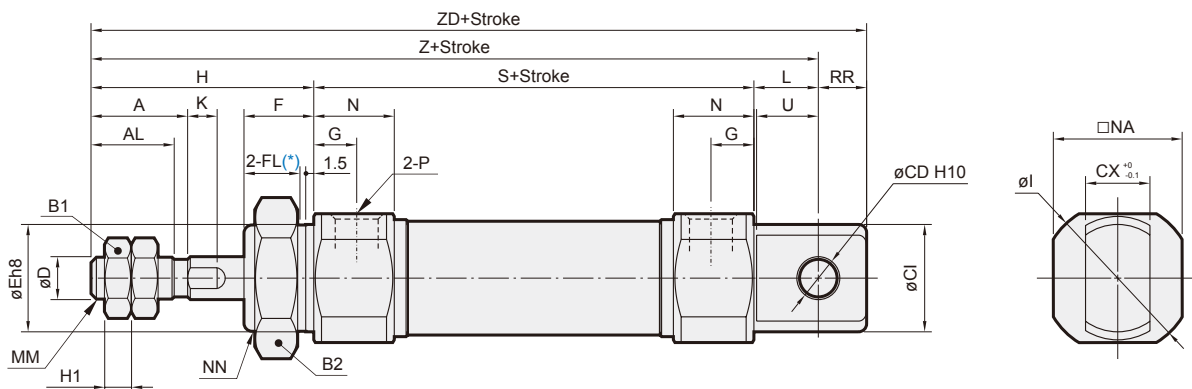


* FL: Effective thread length

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

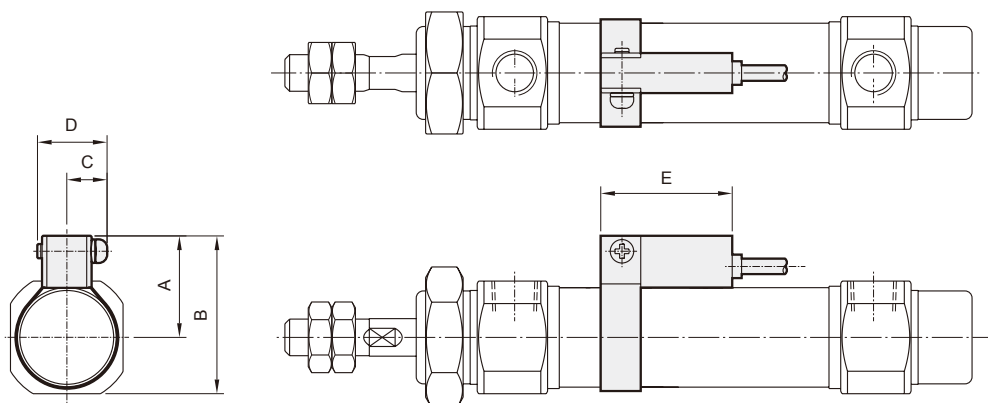


* FL: Effective thread length

Unit: mm

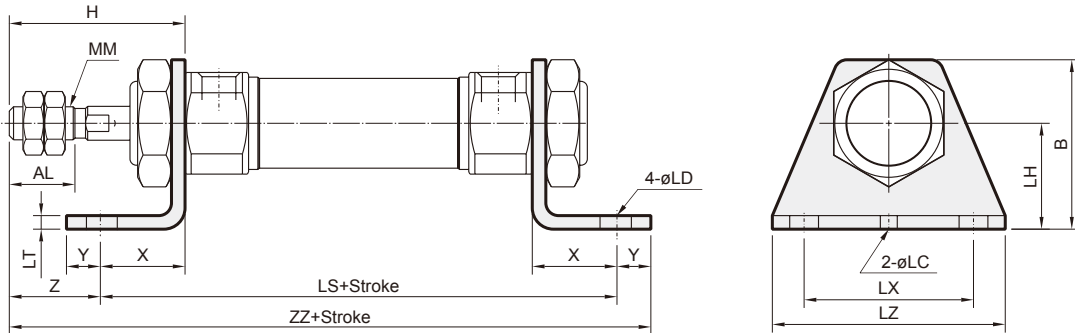
Code Tube I.D.	A	AL	B1	B2	CD	CX	CI	D	E	F	FL	G	H	H1	I	K	L	MM	N	NA	NN	P	RR	S	U	Z	ZD
20	18	15.5	13	26	8	12	20	8	20 ⁰ _{-0.03}	13	10.5	8	41	5	28	5	12	M8×1.25	15	24	M20×1.5	Rc1/8	9	62	11.5	115	124
25	22	19.5	17	32	8	12	22	10	26 ⁰ _{-0.03}	13	10.5	8	45	6	33.5	5	12	M10×1.25	15	30	M26×1.5	Rc1/8	9	62	11.5	119	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

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

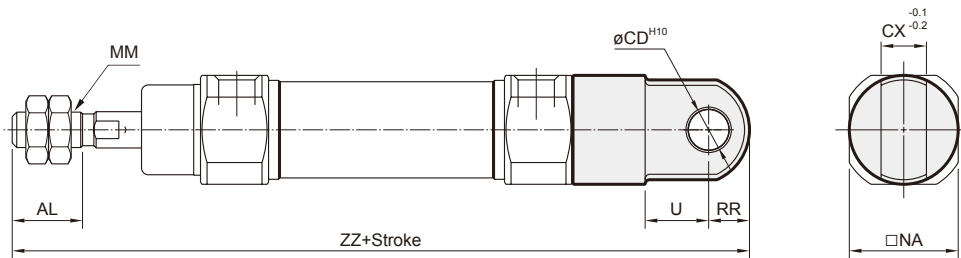
LB



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

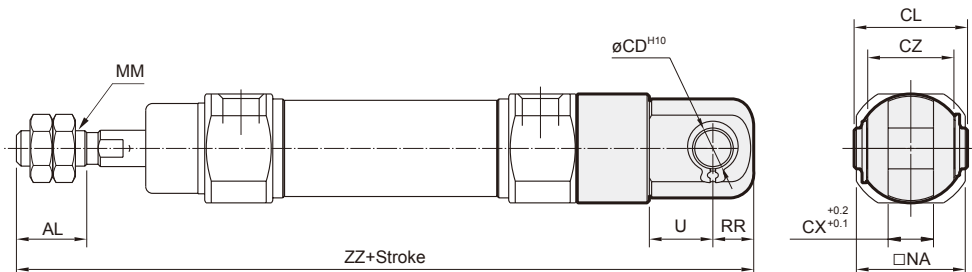
CA



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

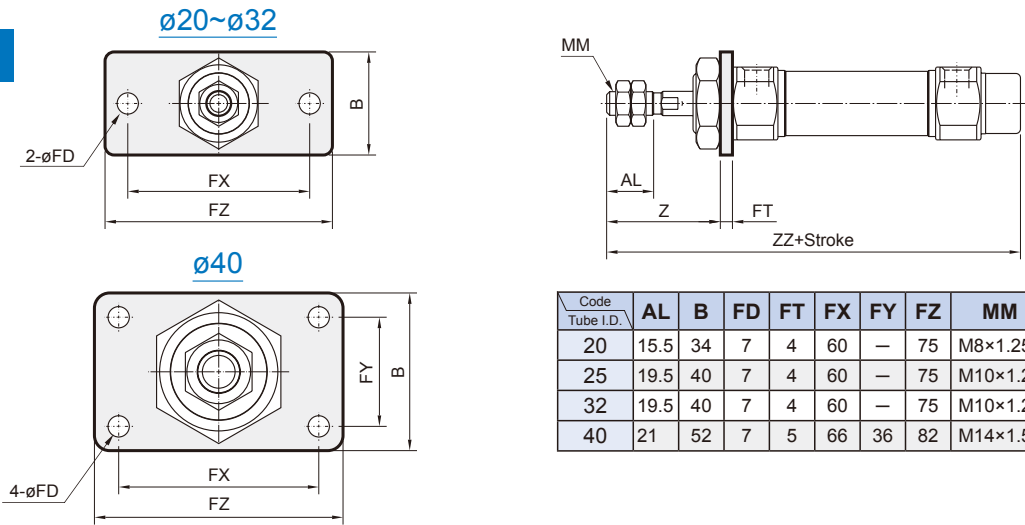


Unit: mm

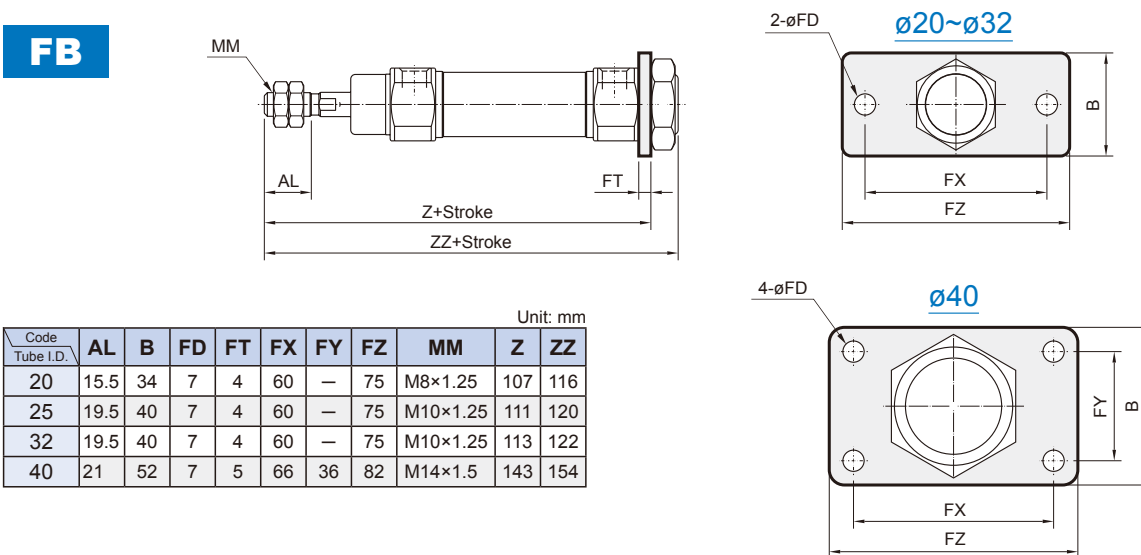
Code Tube I.D.	AL	CD	CL	CX	CZ	MM	NA	RR	U	ZZ
20	15.5	9	25	10	19	M8×1.25	24	9	14	142
25	19.5	9	25	10	19	M10×1.25	30	9	14	146
32	19.5	9	25	10	19	M10×1.25	34.5	9	14	148
40	21	10	41.2	15	30	M14×1.5	42.5	11	18	188

MINIATURE CYLINDER

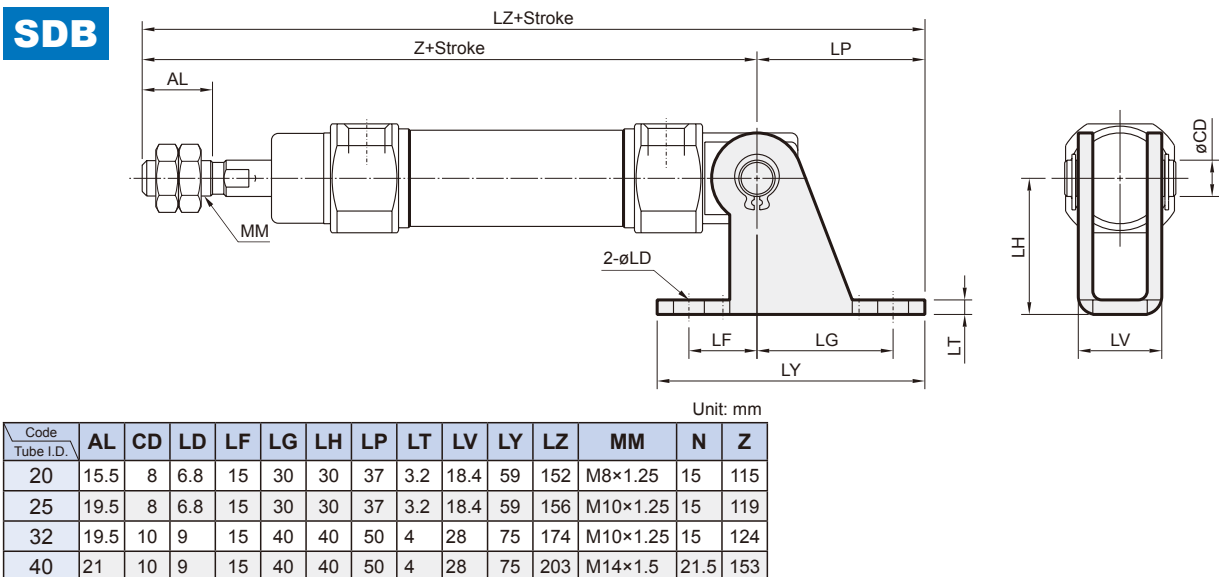
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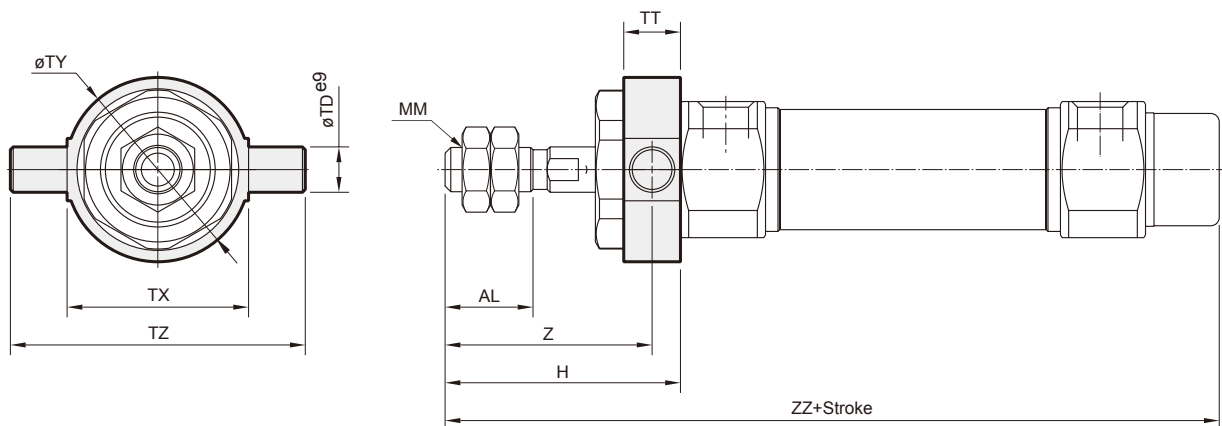
FB



SDB



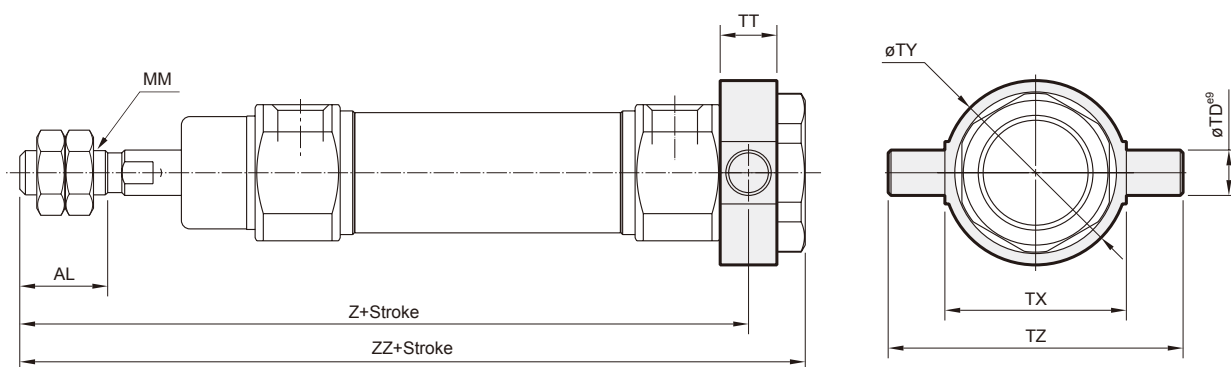
TA



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



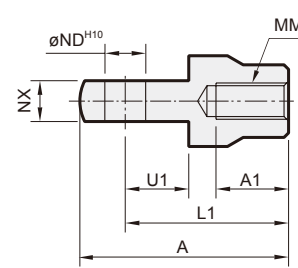
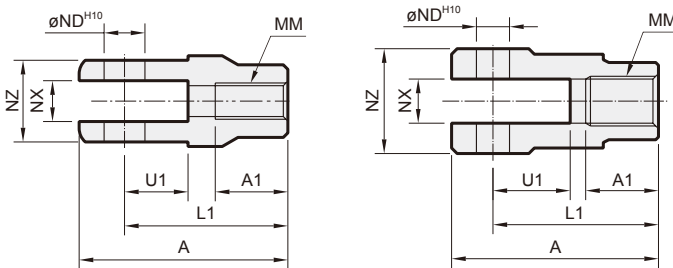
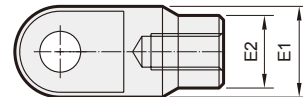
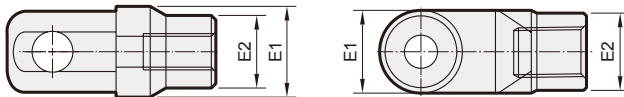
Unit: mm

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

$\phi 20 \sim \phi 32$

$\phi 40$



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

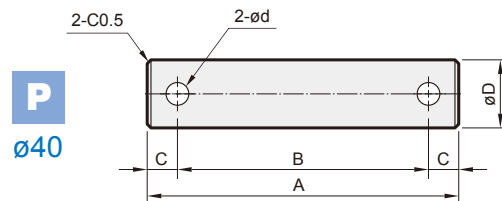
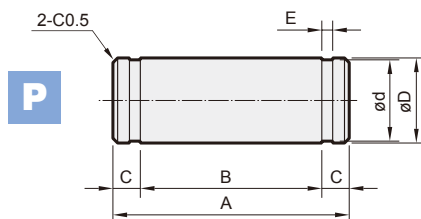
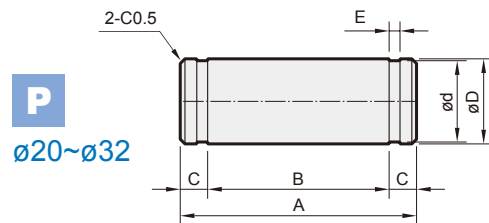
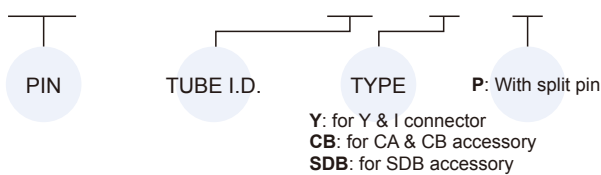
Unit: mm

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^{g9}	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^{g9}	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	—	$\phi 3.2 \times 20L$