MCMB series

MINIATURE CYLINDERS

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.

Model	MCMB			
Tube I.D. (mm)	20	25	32	40
Port size	PT 1/8			PT 1/4
Medium	Air			
Max operating pressure	9.9 kgf/cm^2			
Min operating pressure	0.5 kgf/cm^2			
Proof pressure	15 kgf/cm^2			
Ambient temperature	−5~+60℃ (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

● Senser switch band BM** only for RCM.

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 − BSP

- MODEL
- 11: **1**: Single Rod, **2**: Double Rod
- TUBE I.D.
- STROKE
- Blank: With cushion pad, **A**: With adjustable cushion
- END COVER TYPE:

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

- PORT THREAD: Blank: PT thread, **BSP**: BSP 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

Single acting type: Please consult us.

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

Mounting accessories:

LB − MCMB − 20

- MODEL
- TUBE I.D.
- MOUNTING TYPE

	LB
	CA
	CB
	FA
	FB
	SDB for end cover "E" type
	TA
	TB
	Y
	I

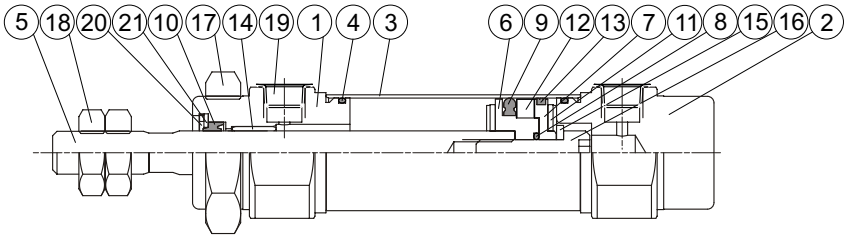
MCMB Inside structure & Parts list

MINIATURE CYLINDERS

Mindman

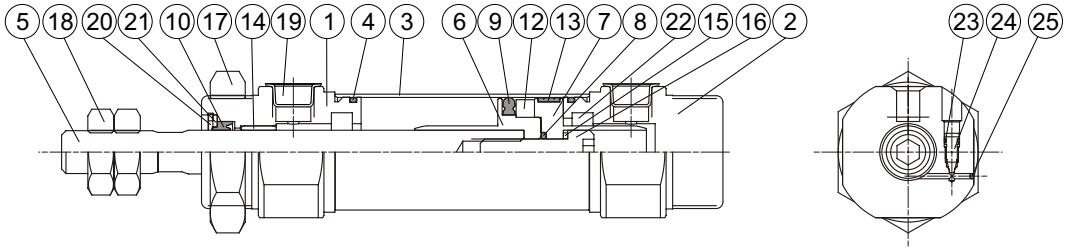
Cushion pad type

ϕ20~ϕ40



Cushion air type

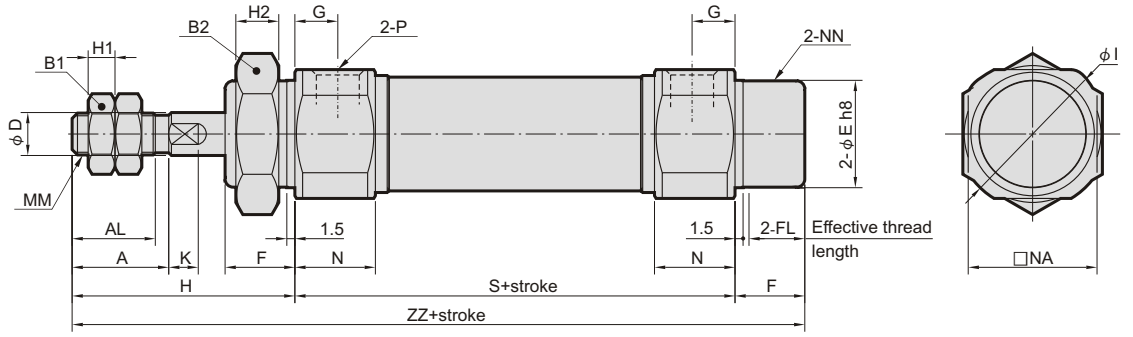
ϕ20~ϕ40



Material :

No.	Cushion		Tube I.D. / Part name	20	25	32	40	Note
	Air	Pad						
1	●	●	Rod cover	Aluminum alloy				
2	●	●	Head cover	Aluminum alloy				
3	●	●	Tube	Stainless steel				
4	●	●	Cover ring	NBR				
5	●	●	Piston rod	Medium carbon steel				※Stainless steel
6	●	●	Piston-R	Polyurethane				ϕ25 - Aluminum alloy
7	●	●	Piston-H	Polyurethane				ϕ25 - Aluminum alloy
8	●	●	Piston gasket	NBR				
9	●	●	Piston packing	NBR				
10	●	●	Rod packing	NBR				
11		●	Cushion gasket	NBR				
12	●	●	Magnet ring	Magnet material				
13	●	●	Wear ring	Teflon + Graphite				
14	●	●	Rod bush	Bearing alloy				
15		●	Washer	Carbon steel				only for ϕ25
16	●	●	Piston bolt	SCM				
17	●	●	Tie nut	Carbon steel				
18	●	●	Rod front nut	Carbon steel				
19	●	●	Port plug	Plastic				
20	●	●	Snap ring	Spring steel				
21	●	●	Washer	Carbon steel				
22	●		Cushion packing	NBR				
23	●		Needle valve packing	NBR				
24	●		Needle valve	Stainless steel		Carbon steel		
25	●		Steel ball	Stainless steel				

11



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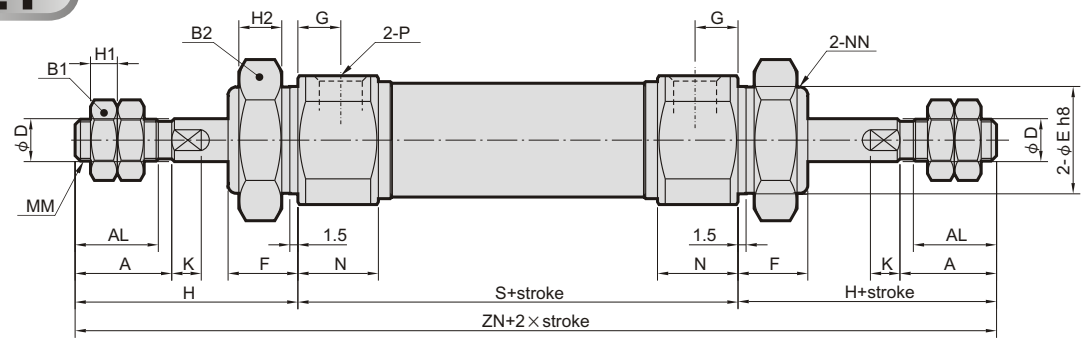

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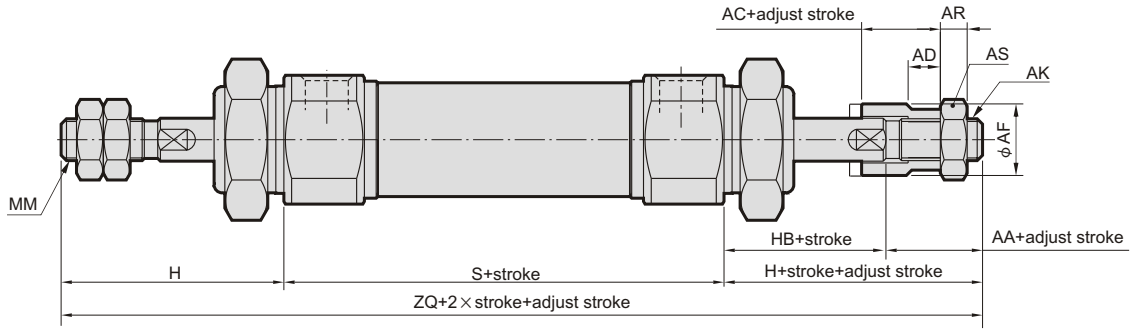
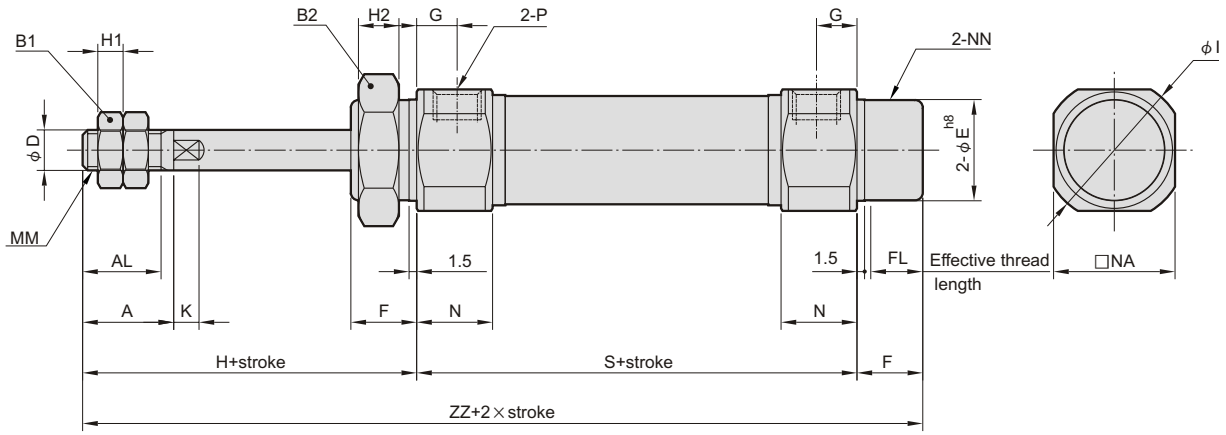


(mm)

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	PT 1/8	62	144	141	116
25	15	30	M26×1.5	PT 1/8	62	152	146	120
32	15	34.5	M26×1.5	PT 1/8	64	154	145	122
40	21.5	42.5	M32×2.0	PT 1/4	88	188	178	154

13



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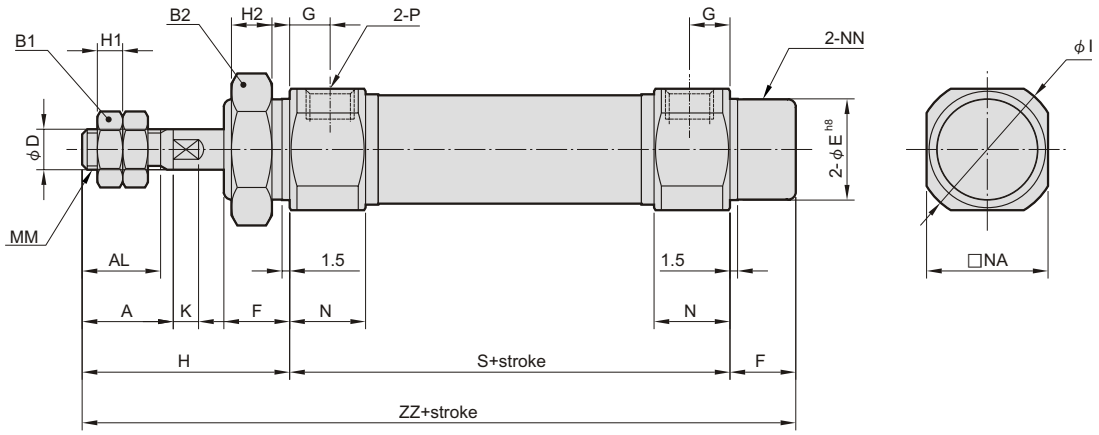
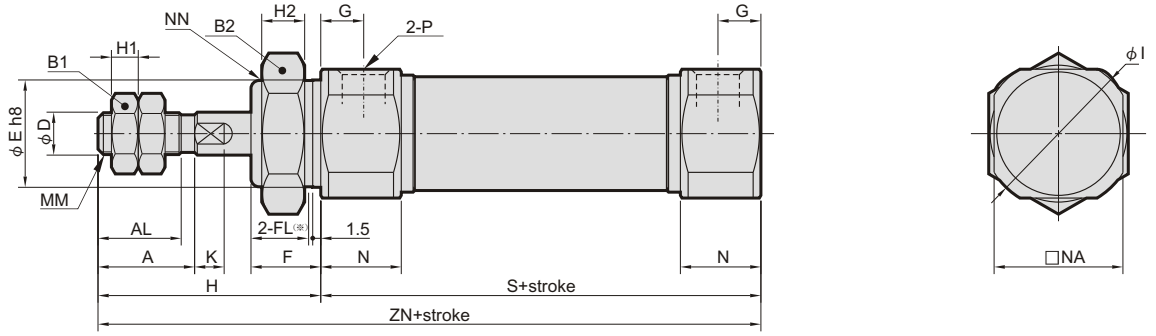


Code / Tube I.D.	A	AL	B1	B2	D	E	F	FL	G	H	H1	H2	I	K	MM	N	NA	NN	P
20	18	15.5	13	26	8	$20^{0}_{-0.03}$	13	10.5	8	41	5	8	28	5	M8×1.25	15	24	M20×1.5	PT 1/8
25	22	19.5	17	32	10	$26^{0}_{-0.03}$	13	10.5	8	45	6	8	33.5	5	M10×1.25	15	30	M26×1.5	PT 1/8
32	22	19.5	17	32	12	$26^{0}_{-0.03}$	13	10.5	8	45	6	8	37.5	5.5	M10×1.25	15	34.5	M26×1.5	PT 1/8
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	PT 1/4

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

N

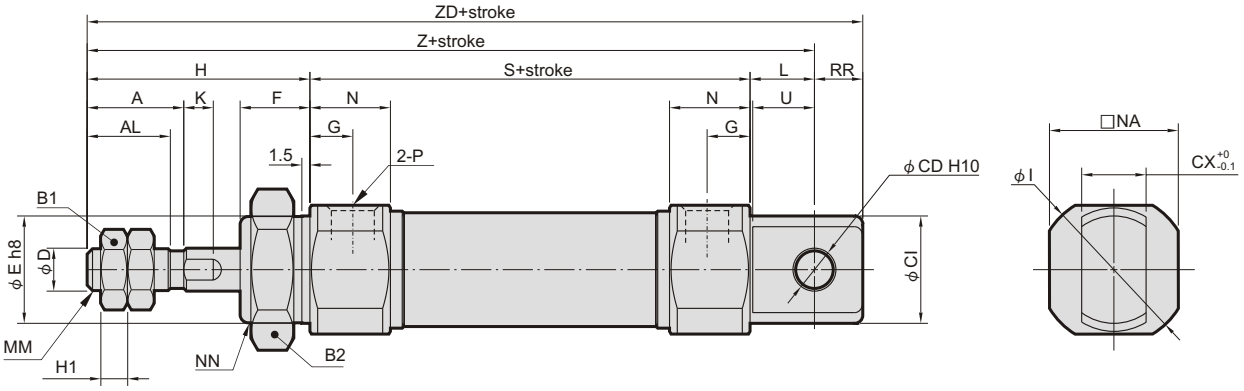


(※) Effective thread length

(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	PT 1/8	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	PT 1/8	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	PT 1/8	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	PT 1/4	88	138

E

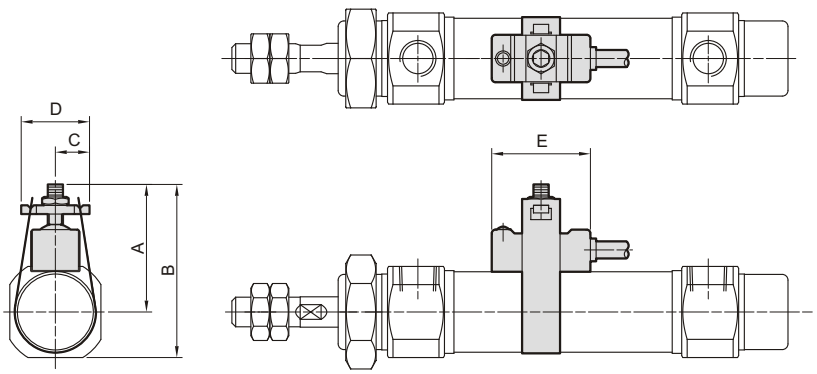


(mm)

Code / Tube I.D.	A	AL	B1	B2	CD	CX	CI	D	E	F	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	8	41	5	28	5	12	M8×1.25	15	24	M20×1.5	PT1/8	9	62	11.5	115	124
25	22	19.5	17	32	8	12	22	10	$26^{0}_{-0.03}$	13	8	45	6	33.5	5	12	M10×1.25	15	30	M26×1.5	PT1/8	9	62	11.5	119	128
32	22	19.5	17	32	10	20	27	12	$26^{0}_{-0.03}$	13	8	45	6	37.5	5.5	15	M10×1.25	15	34.5	M26×1.5	PT1/8	12	64	14.5	124	136
40	24	21	22	41	10	20	33	14	$32^{0}_{-0.04}$	16	11	50	8	46.5	7	15	M14×1.5	21.5	42.5	M32×2.0	PT1/4	12	88	14.5	153	165

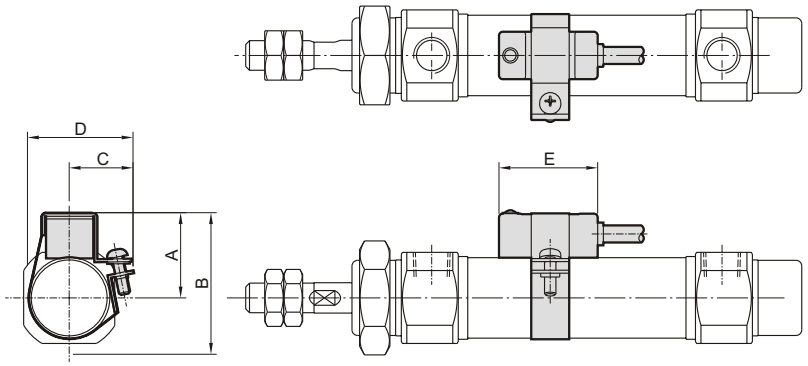
Sensor switch: RCA
Sensor switch band: BA**

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



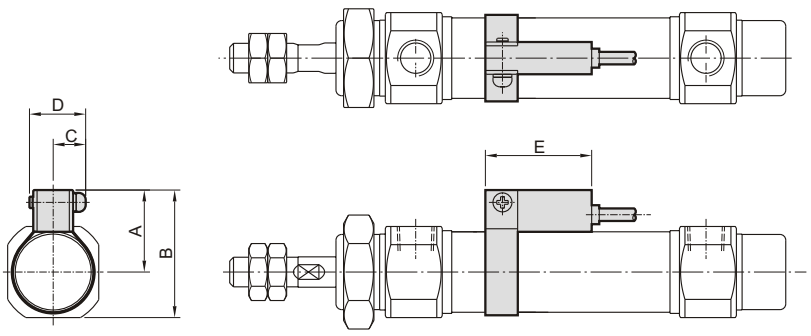
Sensor switch: RCA
Sensor switch band: BGS**

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

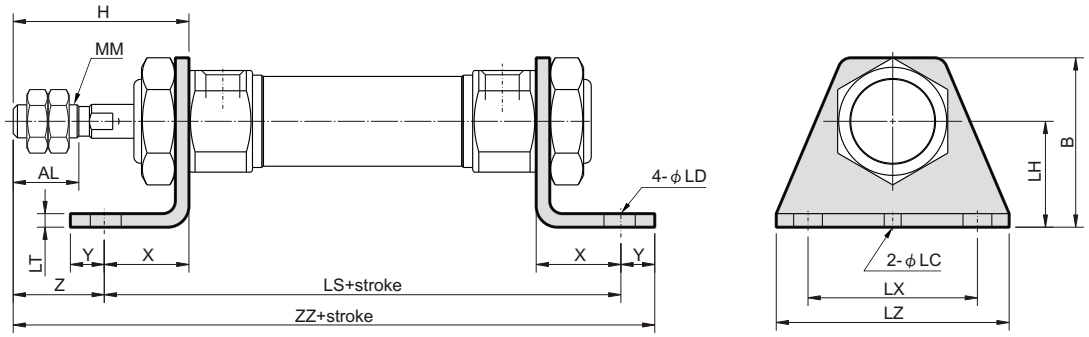


Sensor switch: RCM
Sensor switch band: BM**

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



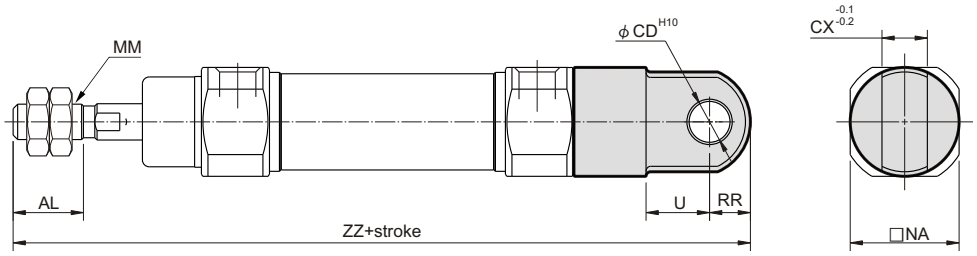
LB



(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

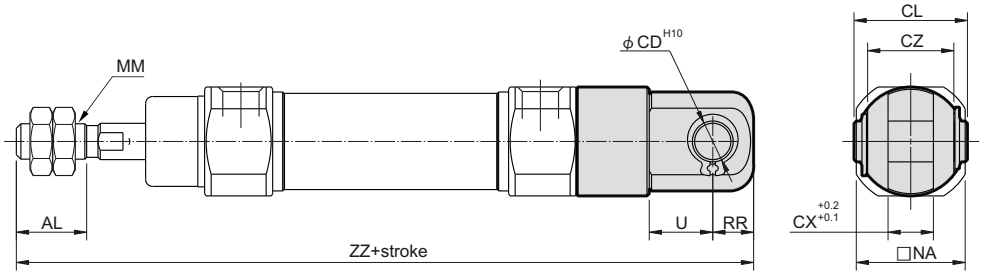
CA



(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

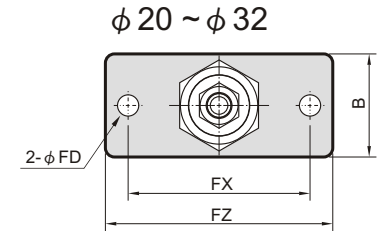
CB

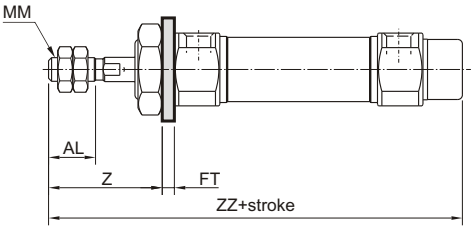


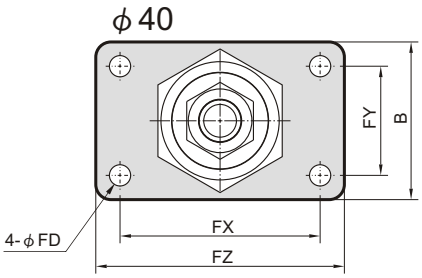
(mm)

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

FA



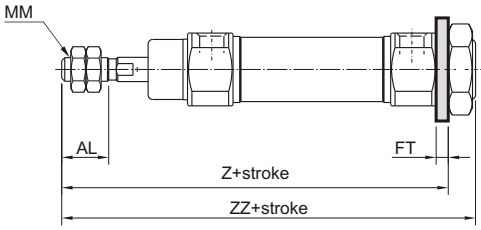


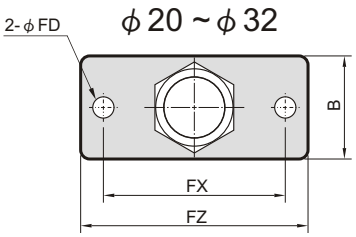


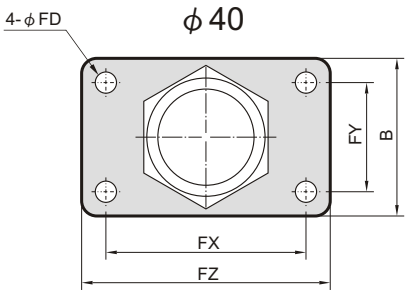
(mm)

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



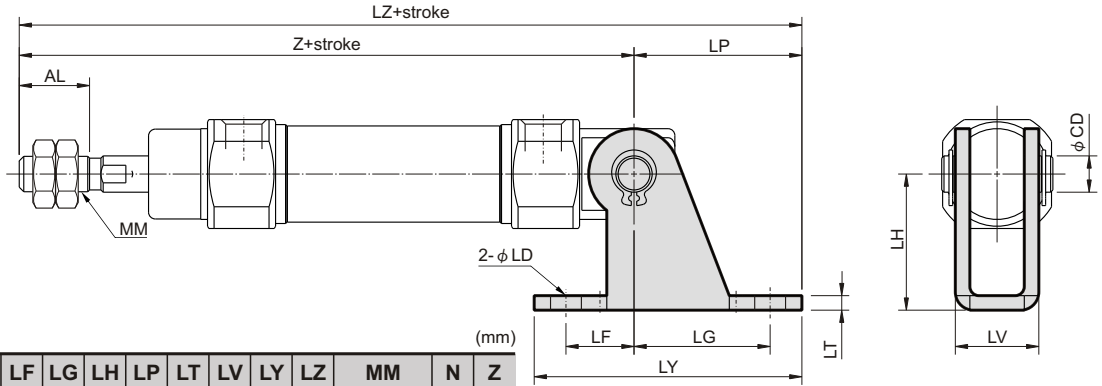




(mm)

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

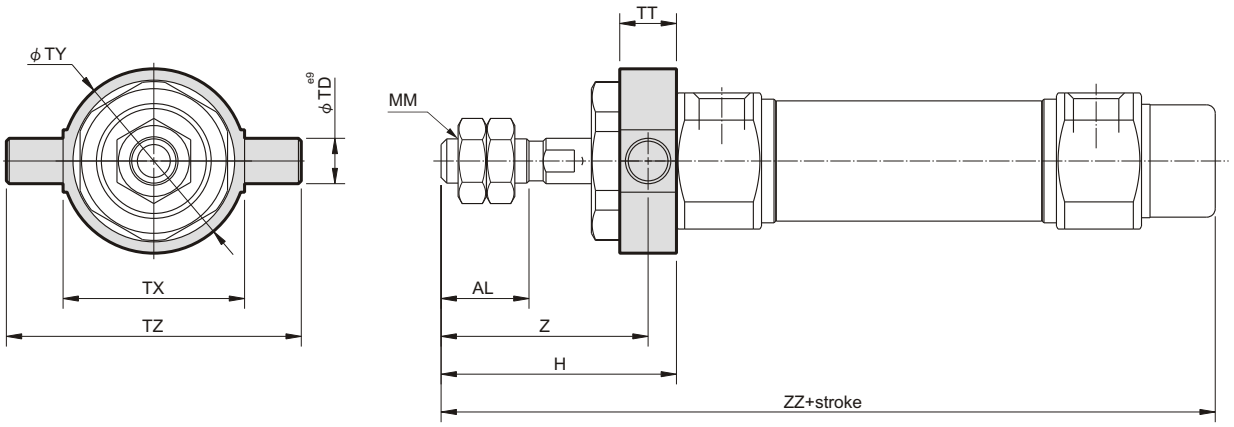
SDB



(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

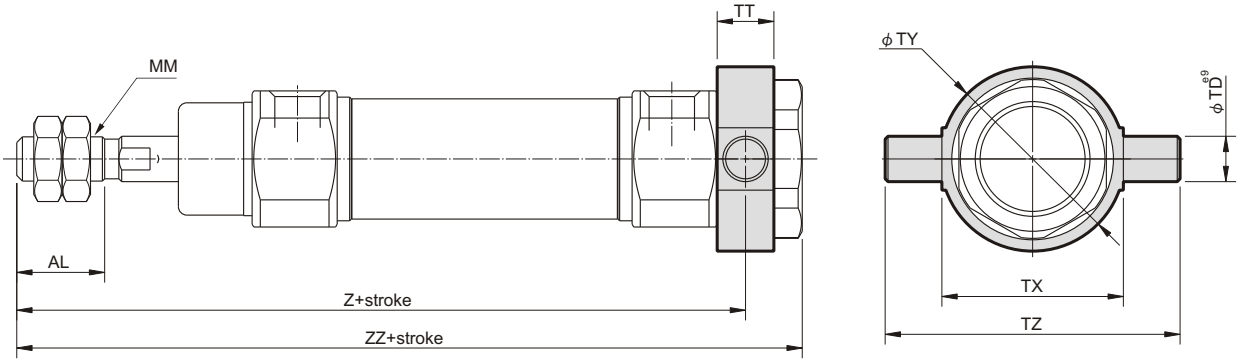
TA



(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	118
25	19.5	45	M10×1.25	9	10	40	40.5	60	40	122
32	19.5	45	M10×1.25	9	10	40	40.5	60	40	124
40	21	50	M14×1.5	10	11	53	53.5	77	44.5	154

TB

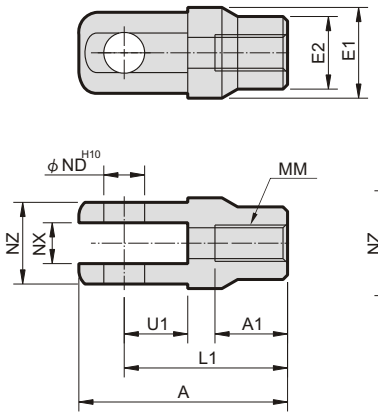


(mm)

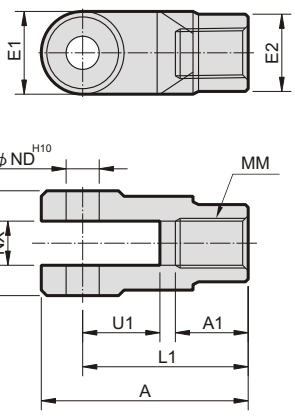
Code / Tube I.D.	AL	MM	TD	TT	TX	TY	TZ	Z	ZZ
20	15.5	M8×1.25	8	10	32	32.5	52	108	118
25	19.5	M10×1.25	9	10	40	40.5	60	112	122
32	19.5	M10×1.25	9	10	40	40.5	60	114	124
40	21	M14×1.5	10	11	53	53.5	77	143.5	154

Y connector

ϕ20~ϕ32



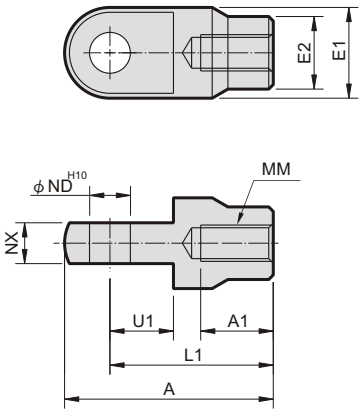
ϕ40



(mm)

Code / Tube I.D.	A	A1	E1	E2	L1	MM	ND	NX	NZ	U1
20	46	16	ϕ20	ϕ16	36	M8×1.25	9	$9^{+0.2}_{+0.1}$	18	14
25, 32	46	16	ϕ20	ϕ16	36	M10×1.25	9	$9^{+0.2}_{+0.1}$	18	14
40	68	25	26	ϕ24	55	M14×1.5	12	$16^{+0.3}_{+0.1}$	38	25

I connector

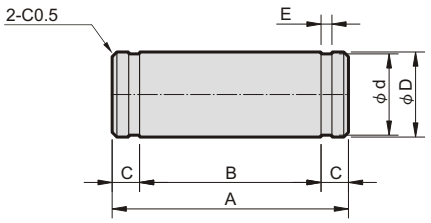


(mm)

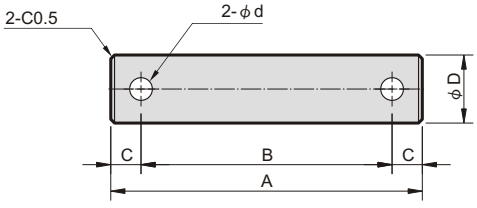
Code / Tube I.D.	A	A1	E1	E2	L1	MM	ND	NX	U1
20	46	16	ϕ20	ϕ16	36	M8×1.25	9	$9^{+0.1}_{+0.2}$	14
25, 32	46	16	ϕ20	ϕ16	36	M10×1.25	9	$9^{+0.1}_{+0.2}$	14
40	69	22	ϕ24	/	55	M14×1.5	12	$16^{+0.1}_{+0.2}$	20

Pin

ϕ20~ϕ32



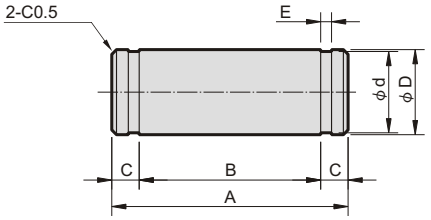
ϕ40



Order example:

PIN – MCMB – 32 – Y – P

- PIN
- TUBE I.D.
- TYPE
  - **Y** : for Y&I connector
  - **CB** : for CA&CB accessory
  - **SDB** : for SDB accessory
- **P** : with split pin



for CB & Y connector

Code / Tube I.D.	A	B	C	ϕ D^{d9}	ϕ d	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	/	ϕ3.2×20L
40-Y	49.7	41.7	4	$12^{-0.05}_{-0.09}$	3.2	/	ϕ3.2×20L

for SDB

Code / Tube I.D.	A	B	C	ϕ D^{d9}	ϕ d	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