



Special spec



Rod end shape



Technical data



Caution for safety  
(Read before installing)



### Table for standard stroke

Acting type	Tube I.D.	Stroke (mm)	Max. stroke (mm)
Single acting 13/15	ø20,25, 32,40	15,25,50,75,100	150
Double acting 11 21/27	ø20,25, 32,40	25,50,75,100,125,150, 200,250,300,400,500	1000
		25,50,75,100,125,150, 200,250,300,400	450

\* Intermediate stroke are available, please contact us.

### 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				
Lubricator	Not required				
Ambient temperature	-5~+60°C (No freezing)				
Available speed range	50~750 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	RDC, RQC, RCM				
Sensor switch band	R°C	BKC-1 (Not for R°CV angle cable)			
	RCM	BM20	BM25	BM32	BM40

### Order example

MCMB - 11 - 20 - 50 - A - 10 - N - G

MODEL  
1: Single rod  
2: Double rod






TUBE I.D. STROKE

ADJUSTABLE STROKE  
\* Only for STYLE 27.

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

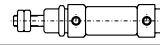
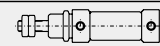
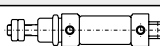
PORT THREAD  
Blank: Rc thread  
G: G thread  
NPT: NPT thread

#### 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

\* Single acting type, please contact us.

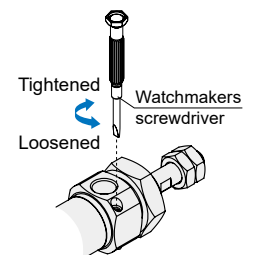
#### END COVER TYPE

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

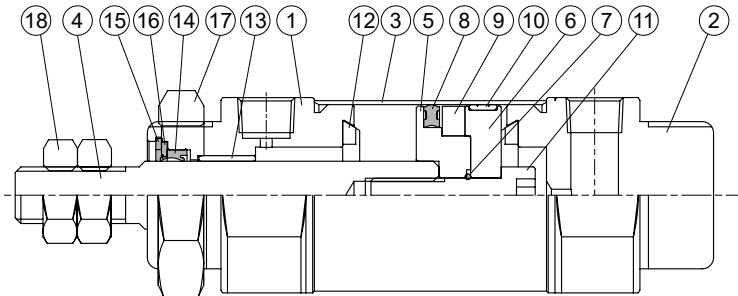
### ⚠ Caution

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 which needs to be within 2.5 turns.
2. If the needle valve loosen excessively, the buffer doesn't take effect and the lifetime of cylinder would be shortened.







### Order example of component parts

**CP – MCMB – 2 – 20 – N – G**

MODEL

Blank: Single rod  
2: Double rod

TUBE I.D.

END COVER TYPE

Blank: Standard type

N: Non-pivot type

E: With pivot type

PORT THREAD

Blank: Rc thread

G: G thread

NPT: NPT thread

### Material

No.	Tube I.D. Part name	20	25	32	40	Q'y		Component parts (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	Resin				1	1	●	●
11	Piston bolt	SCM				1	–	●	●
12	Cushion gasket	NBR				2	2	●	●
13	Rod bush	Bearing alloy				1	2	●	●
14	Rod packing *1	NBR				1	2	●	●
15	Snap ring	Spring steel				1	2	●	●
16	Washer	Carbon steel				1	2	●	●
17	Tie nut	Carbon steel				1	2	●	●
18	Rod front nut	Carbon steel				2	2	●	●

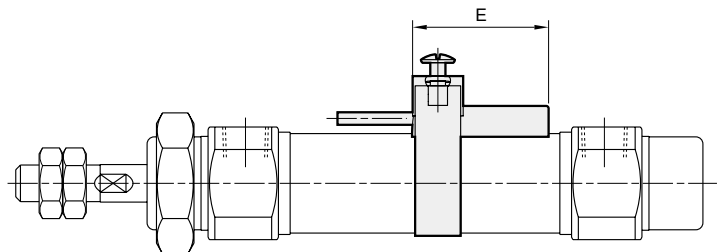
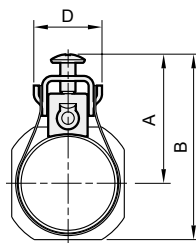
\*1. Only the rod packing is repairable, please contact our sales if needed.

### Installation of sensor switch

Sensor switch: R\*C

Band: BKC-1

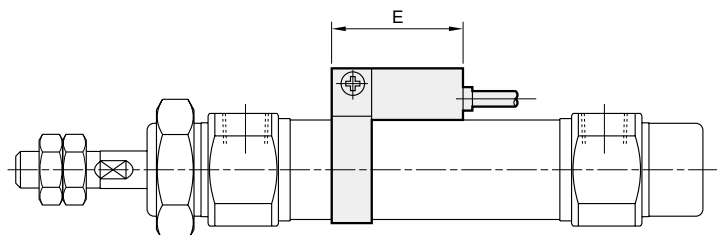
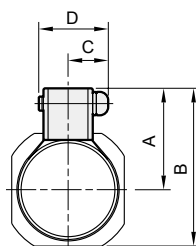
Code Tube I.D.	A	B	D	E
20	26.5	38.5	13.5	27
25	29	44	13.5	27
32	33	50	13.5	27
40	37	58	13.5	27

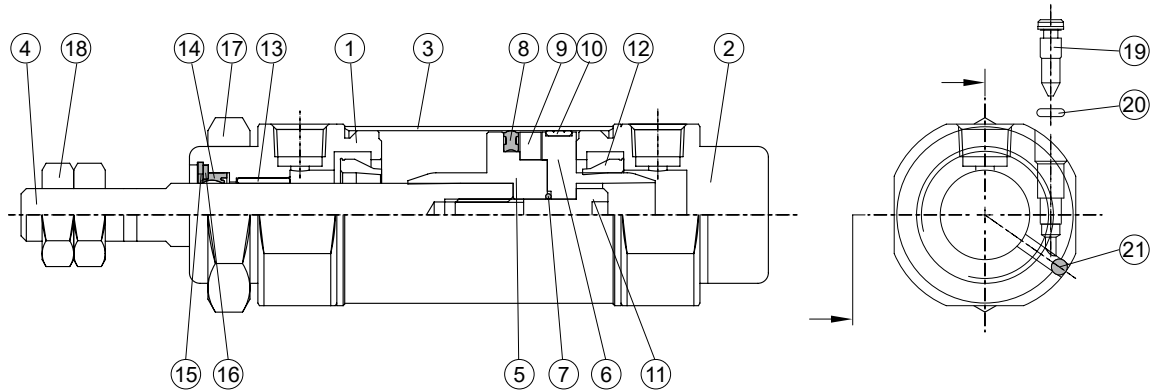


Sensor switch: RCM

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





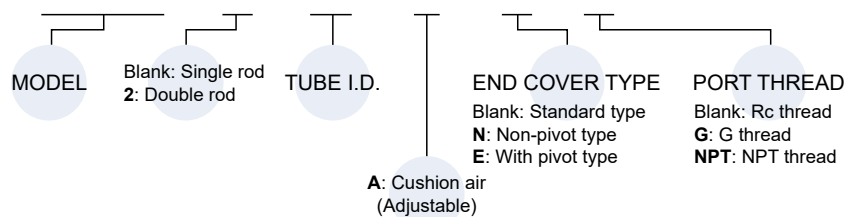
### Material

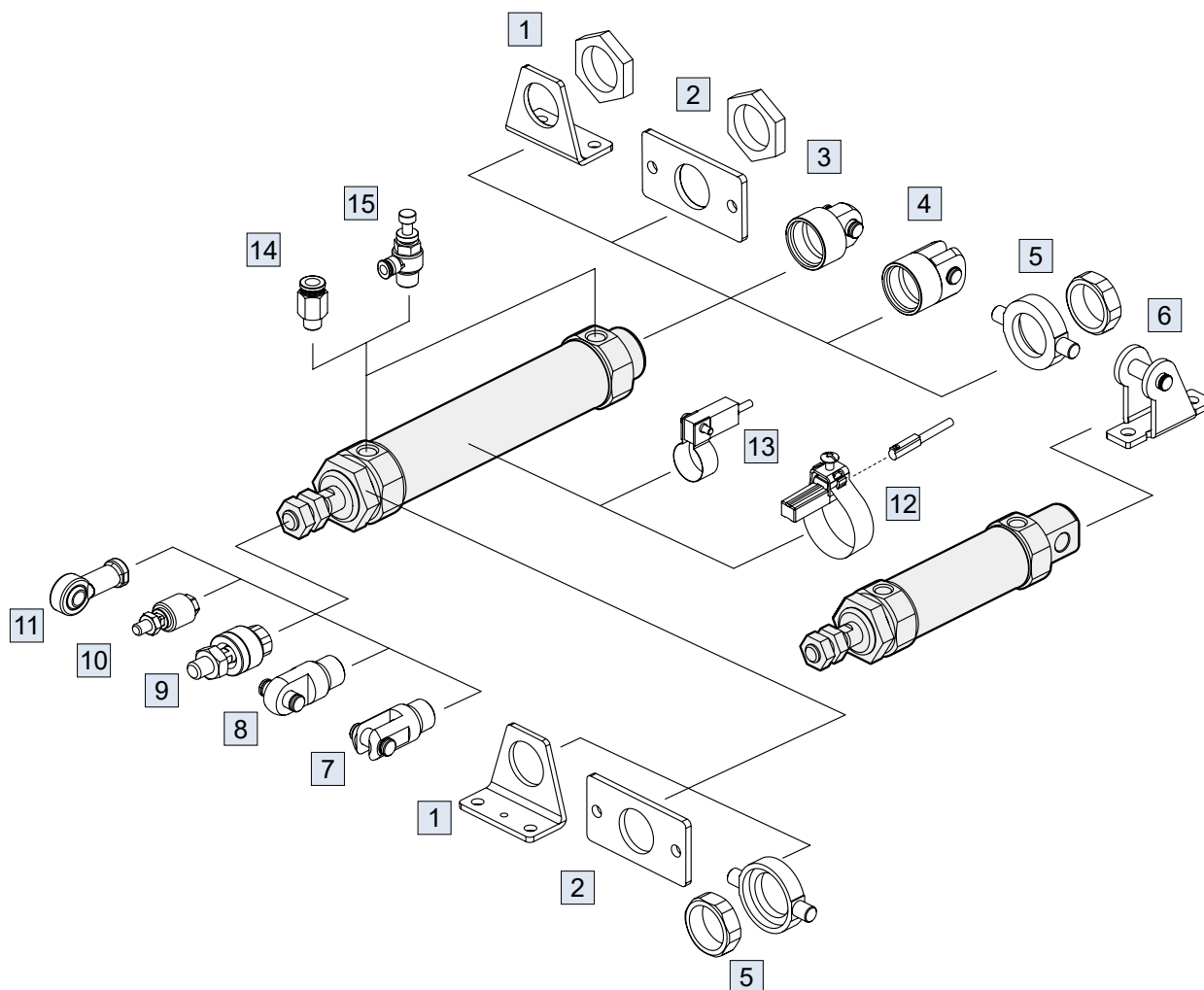
No.	Tube I.D. Part name	20	25	32	40	Q'y		Component parts (inclusion)	
						11 type	21 type	11 type	21 type
1	Rod cover	Aluminum alloy				1	2	●	●
2	Head cover	Aluminum alloy				1	—	●	
3	Tube	Stainless steel				1	1		
4	Piston rod	Carbon steel				1	1		
5	Piston-R	Aluminum alloy				1	1	●	●
6	Piston-H	Aluminum 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	Resin				1	1	●	●
11	Piston bolt	SCM				1	—	●	
12	Cushion packing	NBR				2	2	●	●
13	Rod bush	Bearing alloy				1	2	●	●
14	Rod packing *1	NBR				1	2	●	●
15	Snap ring	Spring steel				1	2	●	●
16	Washer	Carbon steel				1	2	●	●
17	Tie nut	Carbon steel				1	2	●	●
18	Rod front nut	Carbon steel				2	2	●	●
19	Needle valve	Stainless steel	Carbon steel			2	2	●	●
20	Needle valve packing	NBR				2	2	●	●
21	Steel ball	Stainless steel				2	2	●	●

\*1. Only the rod packing is repairable, please contact our sales if needed.

### Order example of component parts

CP – MCMB – 2 – 20 – A – N – G





No.	Accessories	Material	Page link
1	Mounting accessories LB	Carbon steel	<a href="#">↗</a>
2	Mounting accessories FA/FB	Carbon steel	<a href="#">↗</a>
3	Mounting accessories CA+PIN	Carbon steel	<a href="#">↗</a> , <a href="#">↗</a>
4	Mounting accessories CB+PIN	Carbon steel	<a href="#">↗</a> , <a href="#">↗</a>
5	Mounting accessories TA/TB	Cast iron *2	<a href="#">↗</a>
6	Mounting accessories SDB+PIN (*1)	Carbon steel	<a href="#">↗</a> , <a href="#">↗</a>
7	Accessories Y+PIN	Carbon steel *3	<a href="#">↗</a>
8	Accessories I+PIN	Carbon steel	<a href="#">↗</a>

No.	Accessories	Material	Page link
9	Floating joint MFC	Carbon steel	<a href="#">↗</a>
10	Floating joint MFCS	Carbon steel	<a href="#">↗</a>
11	Female rod ends PHS	Carbon steel	<a href="#">↗</a>
12	Sensor switch R*C+BKC-1	-	<a href="#">↗</a>
13	Sensor switch RCM+BM**	-	<a href="#">↗</a>
14	Fitting PC (PISCO)	-	<a href="#">↗</a>
15	Speed controller JSC (PISCO)	-	<a href="#">↗</a>

\*1. Only for end cover "E" type.

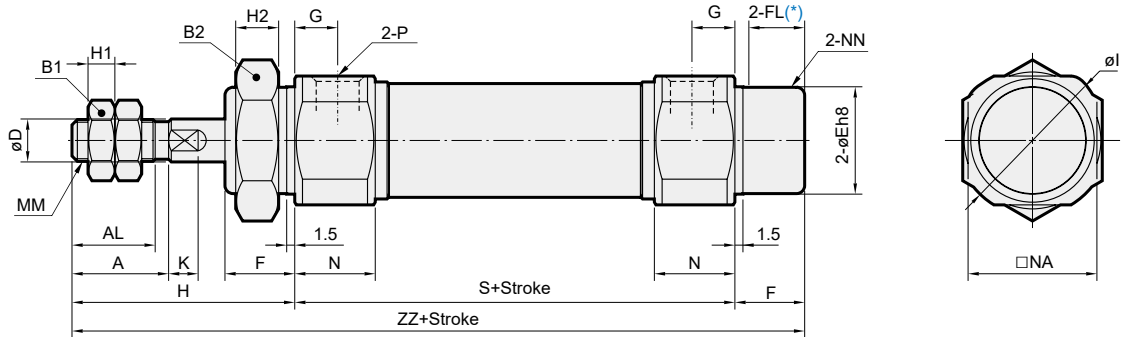
\*2. ø20 material is carbon steel.

\*3. Y accessories ø40 material is cast iron.

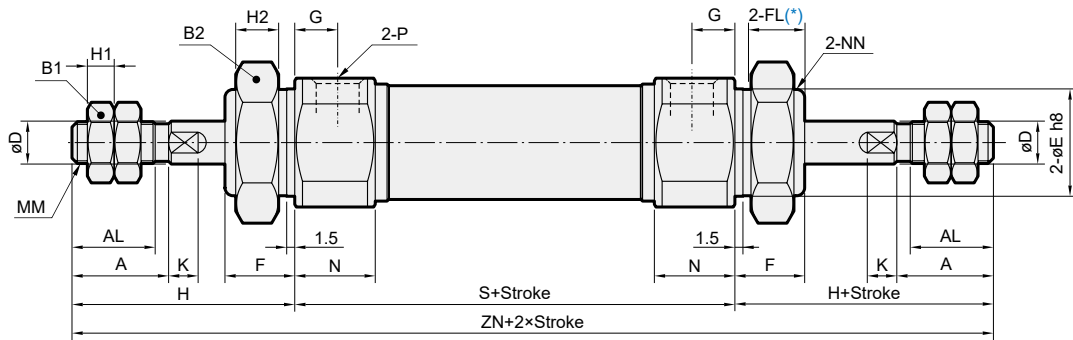
## MINIATURE CYLINDER

mindman

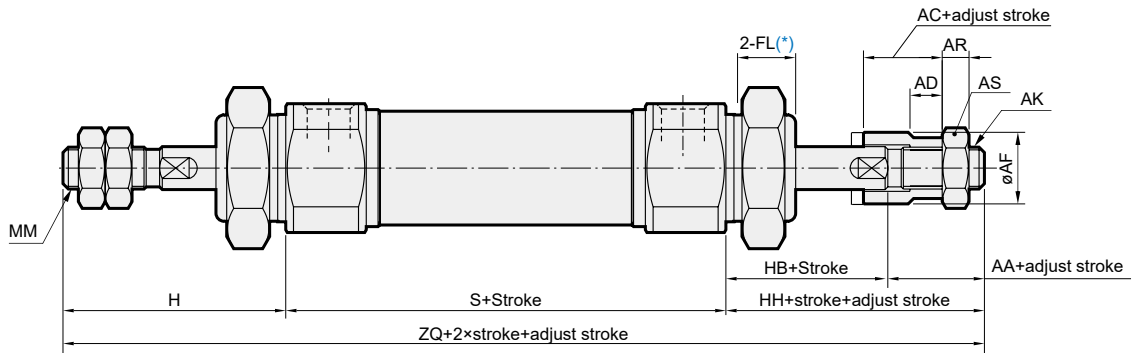
11



21



27



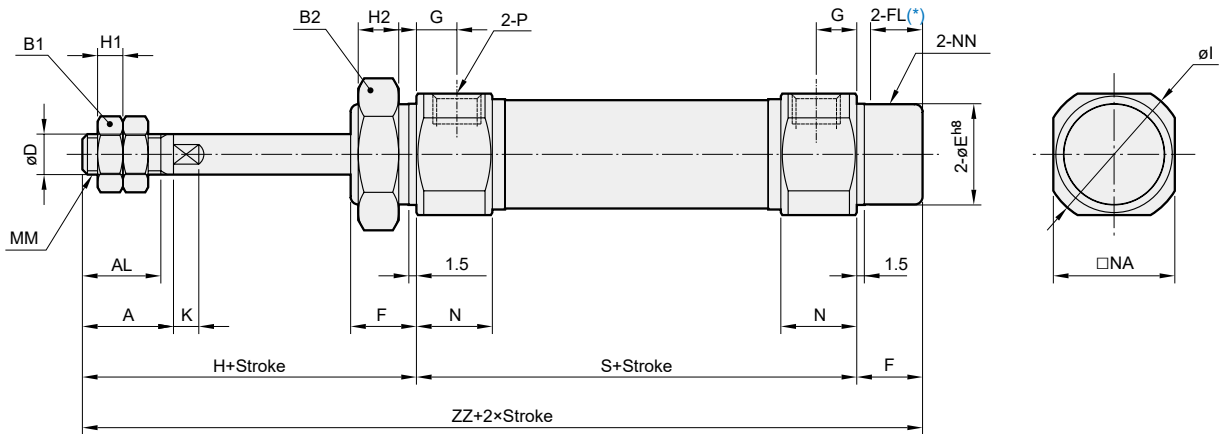
Unit: mm

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 <sup>0</sup> <sub>-0.03</sub>	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 <sup>0</sup> <sub>-0.03</sub>	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 <sup>0</sup> <sub>-0.03</sub>	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 <sup>0</sup> <sub>-0.04</sub>	16	13.5	11	50	8	10	23	40	46.5	7	M14×1.5

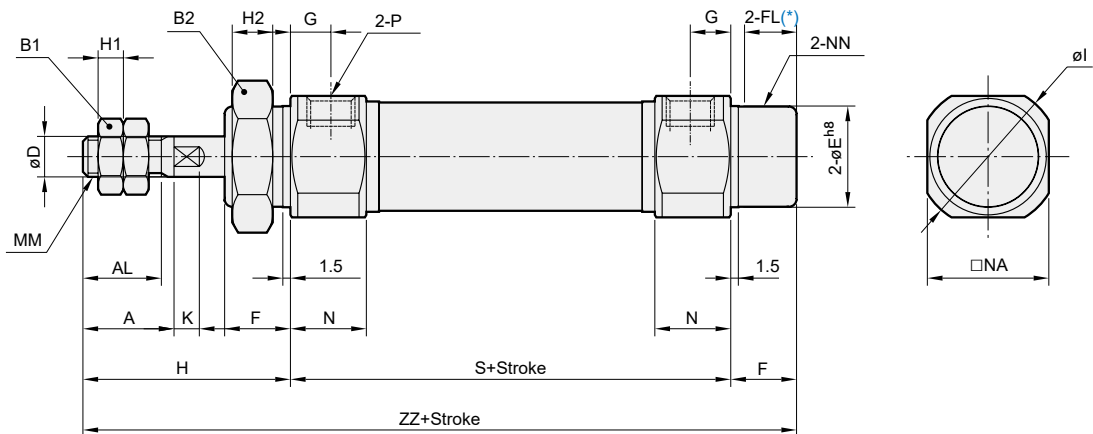
Code Tube I.D.	N	NA	NN	P	S	ZN	ZQ	ZZ
20	15	24	M20×1.5	Rc1/8	62	144	141	116
25	15	30	M26×1.5	Rc1/8	62	152	146	120
32	15	34.5	M26×1.5	Rc1/8	64	154	145	122
40	21.5	42.5	M32×2.0	Rc1/4	88	188	178	154

\* FL: Effective thread length

13



15

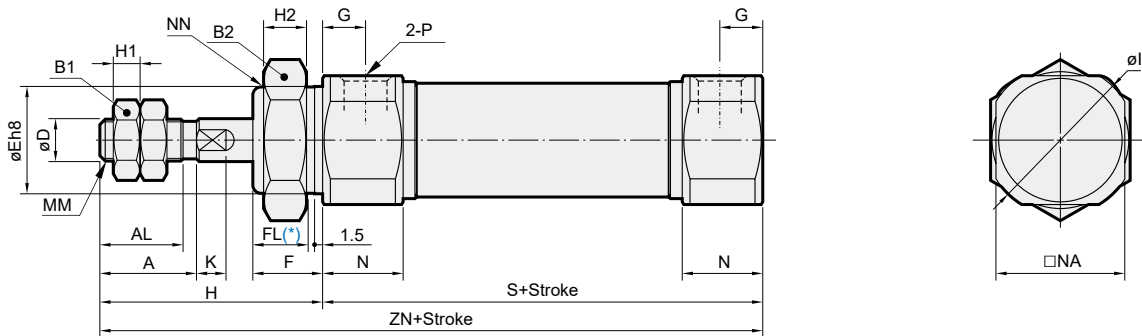


Code Tube I.D.	A	AL	B1	B2	D	E	F	FL	G	H	H1	H2	I	K	MM	N	NA	NN	P
20	18	15.5	13	26	8	20 <sup>0</sup> <sub>-0.03</sub>	13	10.5	8	41	5	8	28	5	M8×1.25	15	24	M20×1.5	Rc1/8
25	22	19.5	17	32	10	26 <sup>0</sup> <sub>-0.03</sub>	13	10.5	8	45	6	8	33.5	5	M10×1.25	15	30	M26×1.5	Rc1/8
32	22	19.5	17	32	12	26 <sup>0</sup> <sub>-0.03</sub>	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 <sup>0</sup> <sub>-0.04</sub>	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

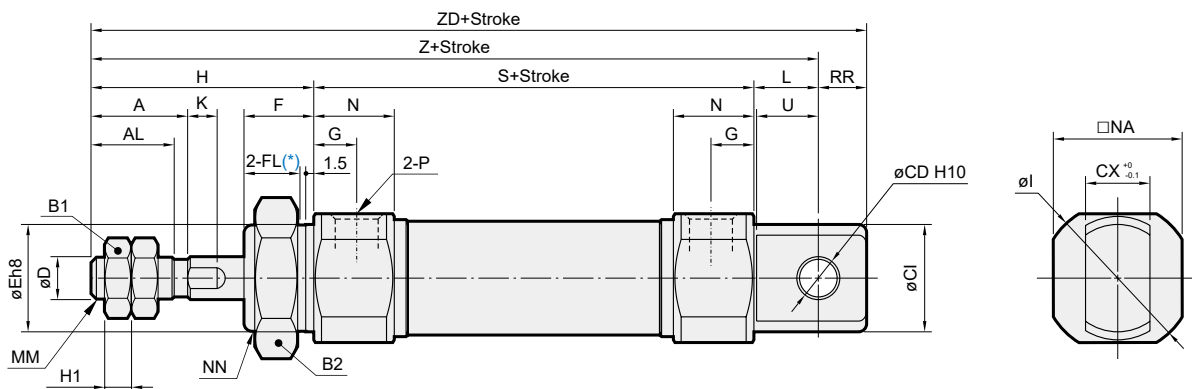


\* FL: Effective thread length

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 <sup>0</sup> <sub>-0.03</sub>	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 <sup>0</sup> <sub>-0.03</sub>	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 <sup>0</sup> <sub>-0.03</sub>	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 <sup>0</sup> <sub>-0.04</sub>	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

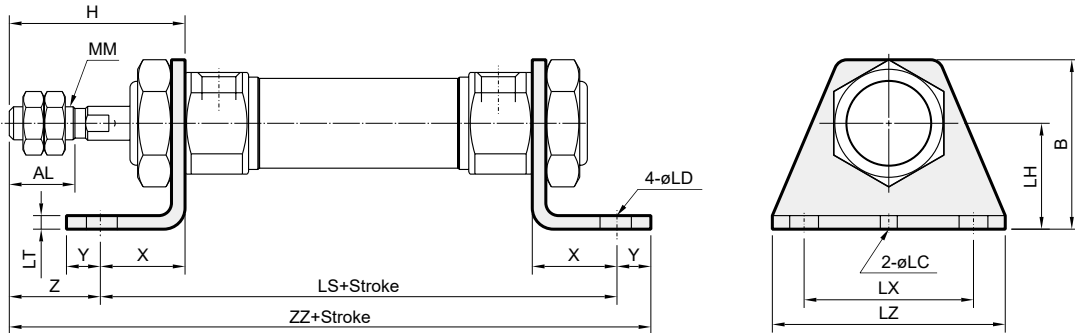


\* FL: Effective thread length

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 <sup>0</sup> <sub>-0.03</sub>	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 <sup>0</sup> <sub>-0.03</sub>	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 <sup>0</sup> <sub>-0.03</sub>	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 <sup>0</sup> <sub>-0.04</sub>	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

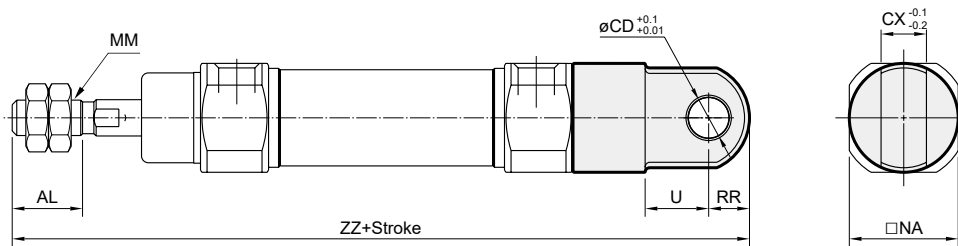
**LB**



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

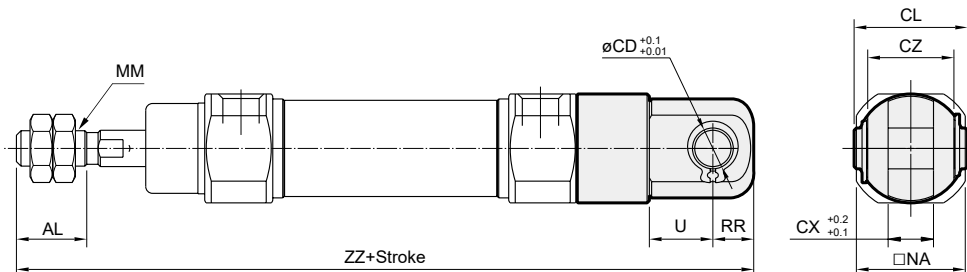
**CA**



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**



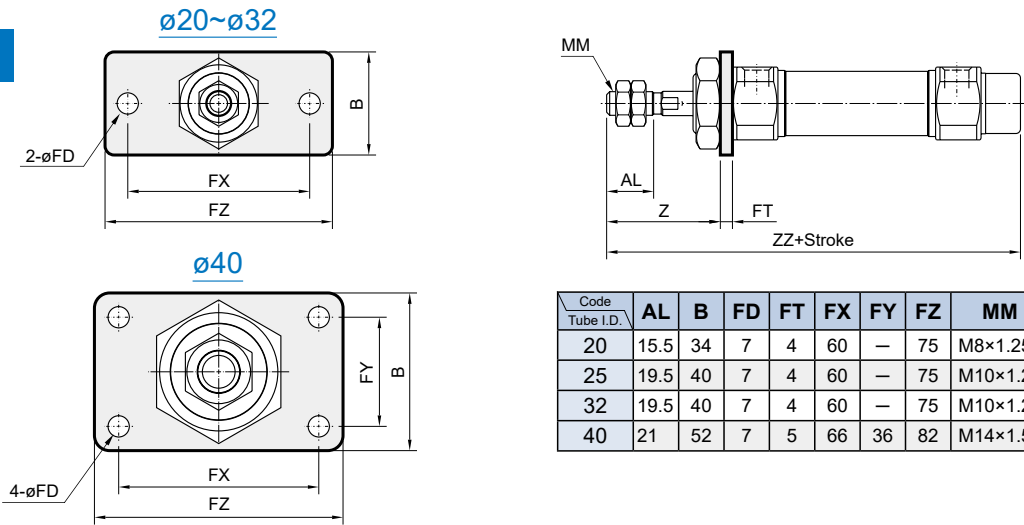
Unit: mm

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

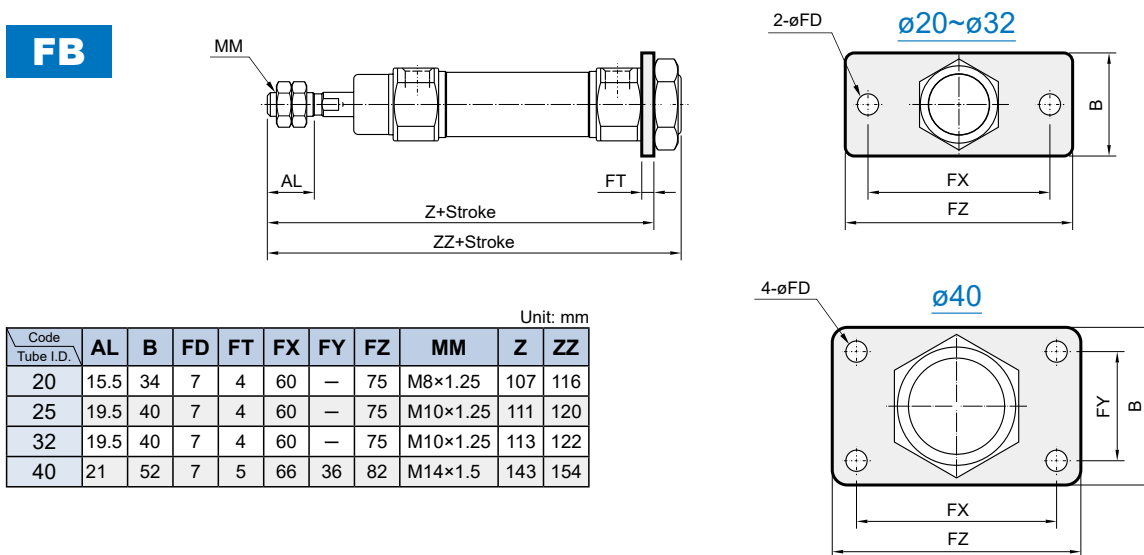
## MINIATURE CYLINDER

mindman

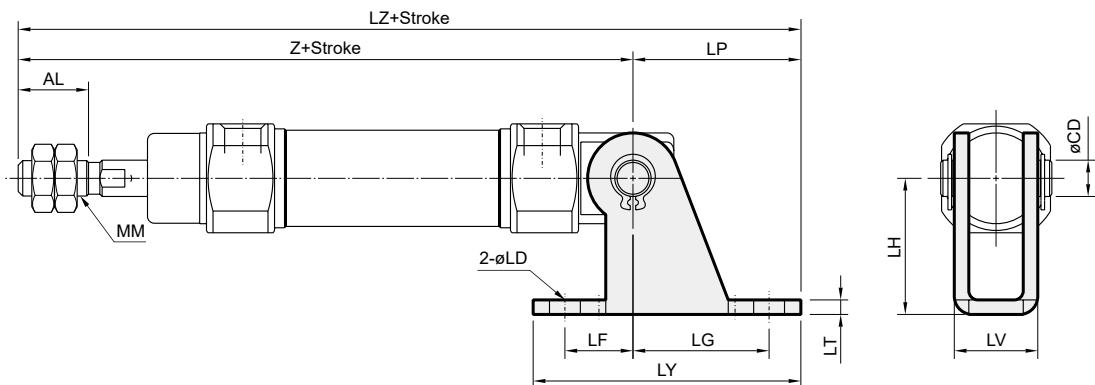
### FA



### FB



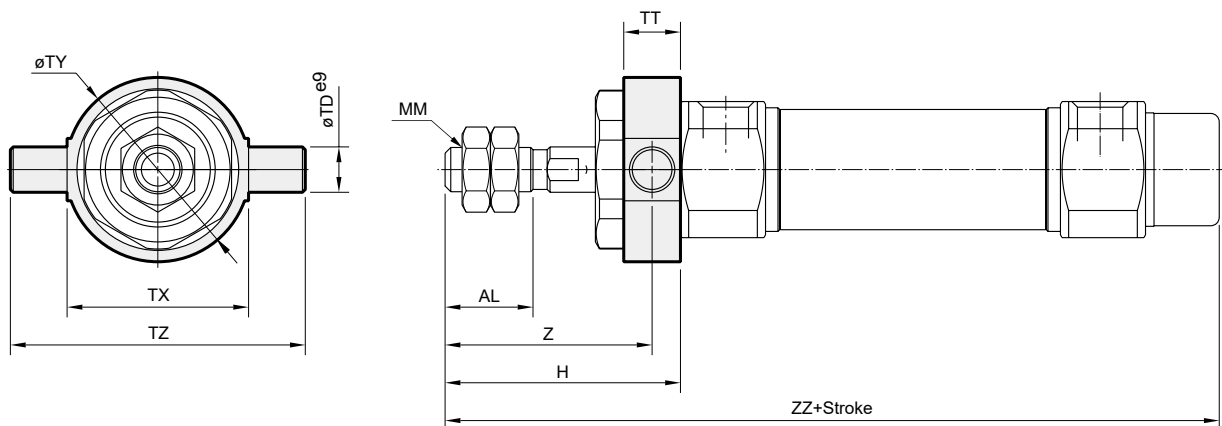
### SDB



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

Unit: mm

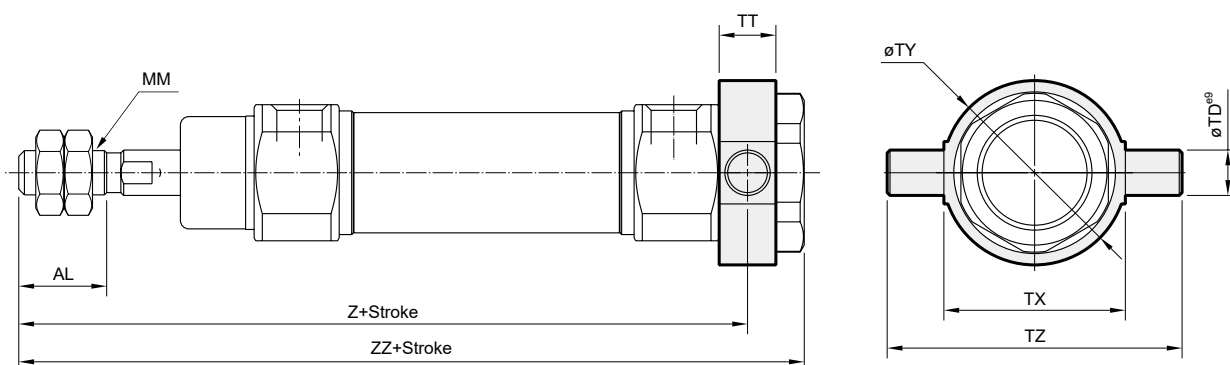
**TA**



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

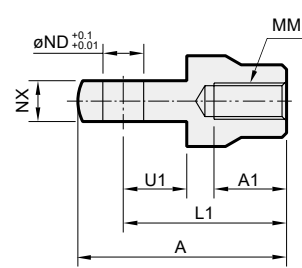
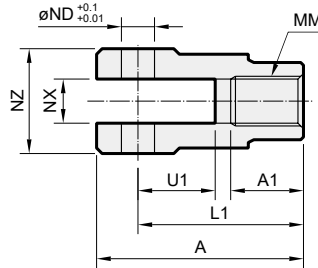
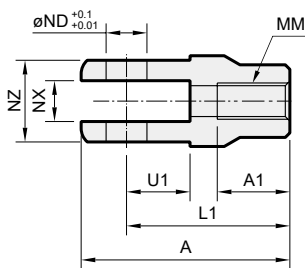
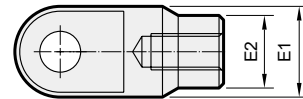
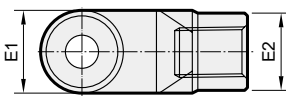
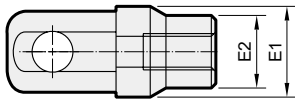
Code Tube I.D.	AL	MM	TD	TT	TX	TY	TZ	Z	ZZ
20	15.5	M8×1.25	8	10	32	32.5	52	108	118
25	19.5	M10×1.25	9	10	40	40.5	60	112	122
32	19.5	M10×1.25	9	10	40	40.5	60	114	124
40	21	M14×1.5	10	11	53	53.5	77	143.5	154

**Y connector**

**I connector**

$\phi 20 \sim \phi 32$

$\phi 40$



Unit: mm

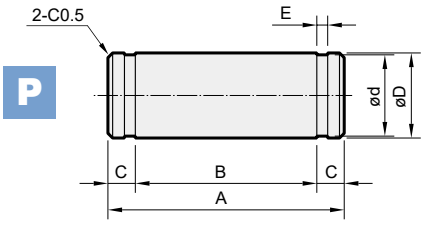
Code Tube I.D.	A	A1	E1	E2	L1	MM	ND	NX	NZ	U1
20	46	16	$\phi 20$	$\phi 16$	36	M8 $\times$ 1.25	9	9 <sup>+0.2</sup> / <sub>+0.1</sub>	18	14
25, 32	46	16	$\phi 20$	$\phi 16$	36	M10 $\times$ 1.25	9	9 <sup>+0.2</sup> / <sub>+0.1</sub>	18	14
40	68	25	$\phi 26$	$\phi 24$	55	M14 $\times$ 1.5	12	16 <sup>+0.3</sup>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

Unit: mm

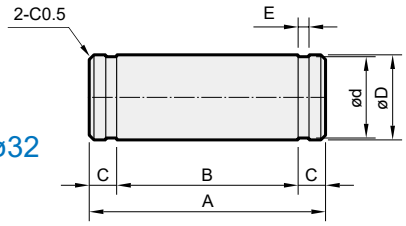
Code Tube I.D.	A	A1	E1	E2	L1	MM	ND	NX	U1
20	46	16	$\phi 20$	$\phi 16$	36	M8 $\times$ 1.25	9	9 <sup>+0.1</sup> / <sub>+0.2</sub>	14
25, 32	46	16	$\phi 20$	$\phi 16$	36	M10 $\times$ 1.25	9	9 <sup>+0.1</sup> / <sub>+0.2</sub>	14
40	69	22	$\phi 24$	—	55	M14 $\times$ 1.5	12	16 <sup>+0.1</sup> / <sub>+0.2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

**PIN**

**P**

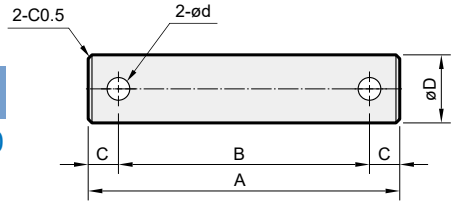


$\phi 20 \sim \phi 32$



**P**

$\phi 40$



for SDB

Code Tube I.D.	A	B	C	$\phi D^{d9}$	$\phi d$	E	Snap ring
20~25	24.5	19.5	2.5	8 <sup>-0.04</sup> / <sub>-0.08</sub>	7.6 <sup>0</sup> / <sub>-0.06</sub>	0.9 <sup>+0.10</sup> / <sub>0</sub>	STW-8
32~40	34	29	2.5	10 <sup>-0.04</sup> / <sub>-0.08</sub>	9.6 <sup>-0</sup> / <sub>-0.09</sub>	1.15 <sup>+0.14</sup> / <sub>0</sub>	STW-9

for CB & Y connector

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