MCCG series

ROUND CYLINDER

Features

- Many mounting options available.
- Interchangeable with other manufacturers.

Specification

Model	MCCG					
Acting type	Double acting					
Tube I.D. (mm)	20	25	32	40	50	63
Port size Rc(PT)	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℃ (No freezing)					
Lubrication	Not required					
Available speed range	50~500 mm/sec					
Max. allowable kinetic energy (J) Cushion pad	0.28	0.41	0.66	1.2	2	3.4
Max. allowable kinetic energy (J) Adjustable cushion	0.35	0.56	0.91	1.8	3.4	4.9
Sensor switch (※)	RCA					
Sensor switch holder	BGA20	BGA25	BGA32	BGA40	BGA50	BGA63

※ RCA specification, please refer to page **8-6**.

Table for standard stroke

Unit: mm

Tube I.D.	Stroke	Long stroke
ϕ20	25, 50, 75, 100, 125, 150, 200	201 ~ 350
ϕ25	25, 50, 75, 100, 125, 150, 200, 250, 300	301 ~ 400
ϕ32		301 ~ 450
ϕ40		301 ~ 800
ϕ50		301 ~ 1200
ϕ63		301 ~ 1200

Please reconfirm the dimension with our sales department when the stroke over our standard.

Order example

MCCG − 11 − 40 − 100 M − A − □

- MODEL
- STYLE
  - **1**: Single Rod
- TUBE I.D.
- STROKE
- **M**: Magnet
- Blank: With cushion pad
  A: With adjustable cushion
- PORT THREAD
  Blank: Rc thread
  NPT: NPT thread

Code		Symbol	Description
1	1		Double acting / Male thread

※ Order example for special specification, refer to page **0-7**.
※ Order example for **G** thread please consult us.

Mounting accessories

FAC − MCCG − 40

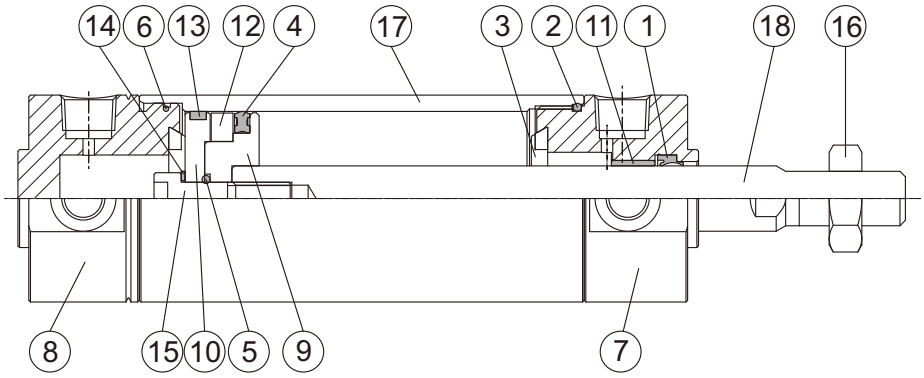
- MODEL
- TUBE I.D.

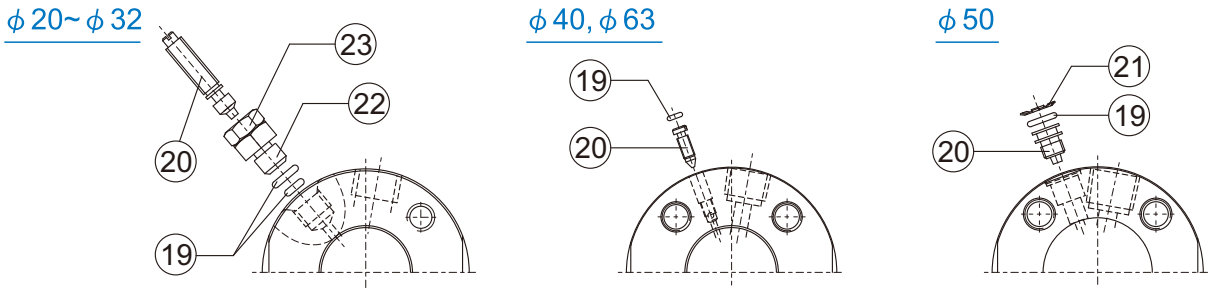
MOUNTING TYPE

	LB
	CB
	FAC
	FBC
	SDB-R
	SDB-H
	CB+SDB
	TA
	TB
	Y
	I

MCCG / MCCN Inside structure & Parts list

ROUND CYLINDER





Material

A: Component parts, B: Repair kits.

No.	Part name	Material	Q'y	A (inclusion)	B (inclusion)	Note
1	Rod packing	NBR	1	●	●	
2	O-ring	NBR	1 or 2	●	●	ϕ 50, 63 (Q'y =2)
3	Cushion pad	NBR	2	●	●	
4	Piston packing	NBR	1	●	●	
5	O-ring	NBR	1	●	●	
6	O-ring	NBR	1	●		for ϕ 50, ϕ 63
7	Rod cover	Aluminum alloy	1	●		
8	Head cover	Aluminum alloy	1	●		
9	Piston-R	Aluminum alloy	1	●		
10	Piston-H	Aluminum alloy	1	●		
11	Bush	Bearing alloy	1	●		
12	Magnet ring	Magnet material	1	◎		◎ Option
	Spacer ring	Aluminum alloy	1	●		for ϕ 20~ ϕ 32
13	Wear ring	Teflon	1	●		
14	Washer	Carbon steel	1	●		ϕ 20 without
15	Piston bolt	Carbon steel	1	●		
16	Nut	Carbon steel	1	●		
17	Cylinder tube	Aluminum alloy	1			
18	Piston rod	Carbon steel	1			ϕ 20~25 stainless steel
19	O-ring	NBR	4or2			ϕ 40~ 63(Q'y =2)
20	Needle valve	Stainless steel	2			(※)
21	Needle valve packing	Carbon steel	2			only for ϕ 50
22	Needle valve fixed nut	Stainless steel	2			only for ϕ 20~ ϕ 32
23	Hex nut	Carbon steel	2			only for ϕ 20~ ϕ 32

※ ϕ 50: Copper, ϕ 63: Carbon steel

Order example of component parts

CP – MCCG – 20 SM – □

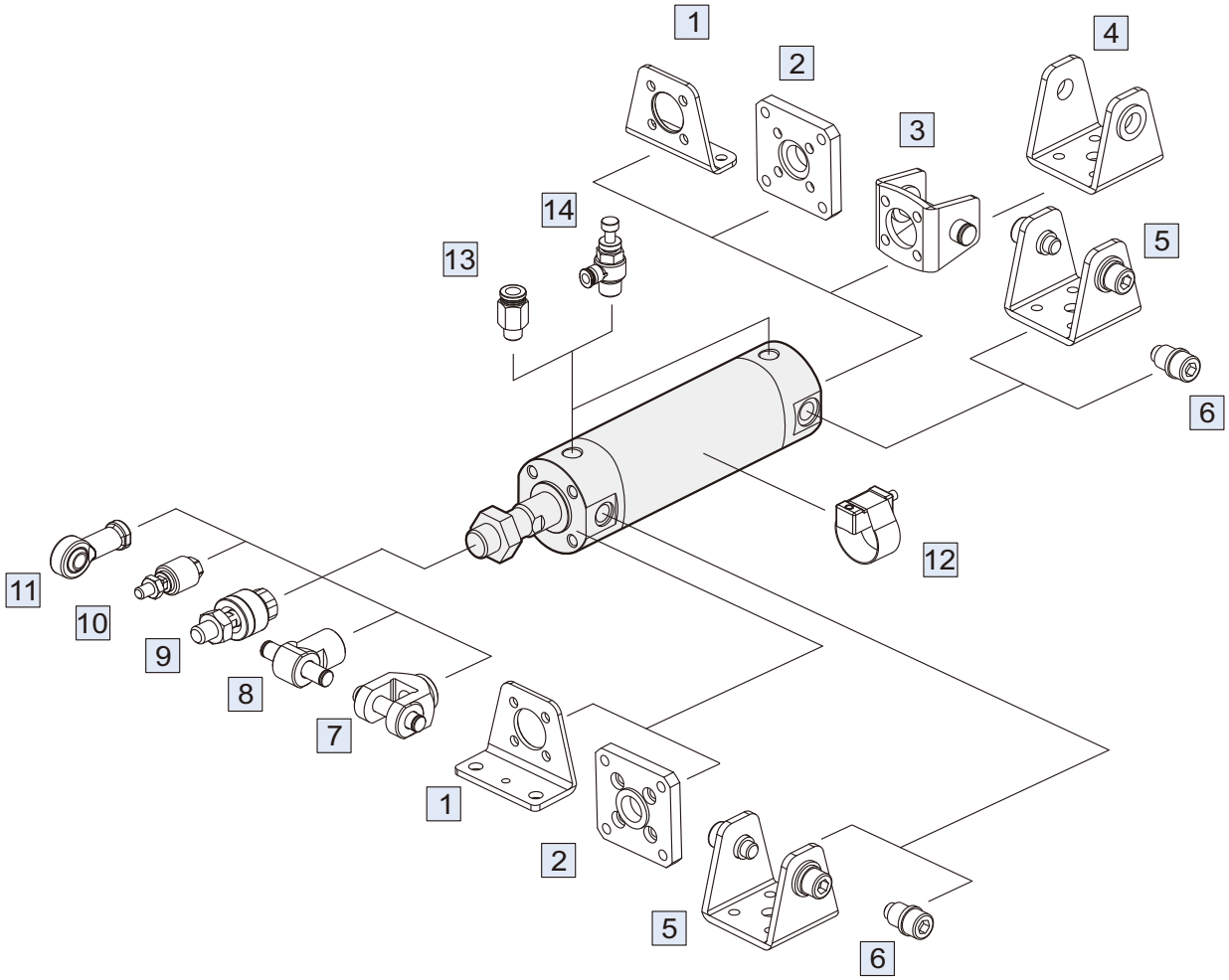
- MODEL: **MCCG**, **MCCN**
- TUBE I.D.: **20**, **32**, **40**, **50**, **63**
- **M**: Magnet
- **S**: Standard stroke
- **H**: Long stroke
- PORT THREAD: Blank: Rc thread, **NPT**: NPT thread

※ **MCCN** only be used for NPT.
※ Order example for **G** thread please consult us.

Order example of repair kits

PS – MCCG – 20 – XB6

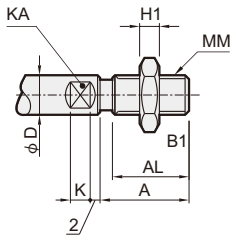
- MODEL: **MCCG**, **MCCN**
- TUBE I.D.: **20**, **32**, **40**, **50**, **63**
- Blank: NBR
- **XB6**: Heat resistant material



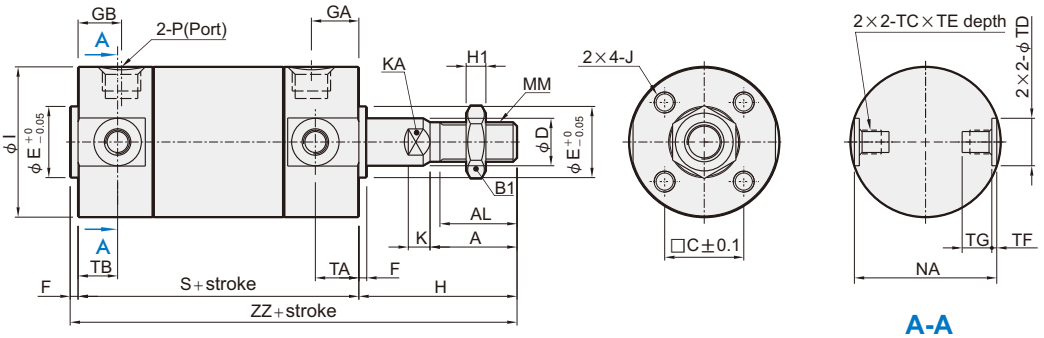
No.	Accessories	Page
1	Mounting accessories LB	3-74
2	Mounting accessories FAC/FBC	3-75
3	Mounting accessories CB+PIN	3-74, 77
4	Mounting accessories SDB	3-76
5	Mounting accessories SDB-R/H	3-76
6	Mounting accessories TA/TB	3-76
7	Accessories Y+PIN	3-77
8	Accessories I+PIN	3-77

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 RCA+BGA**	8-6
13	Fitting PC (PISCO)	8-5 (Vol.1)
14	Speed controller JSC (PISCO)	8-18 (Vol.1)

ϕ20, ϕ25



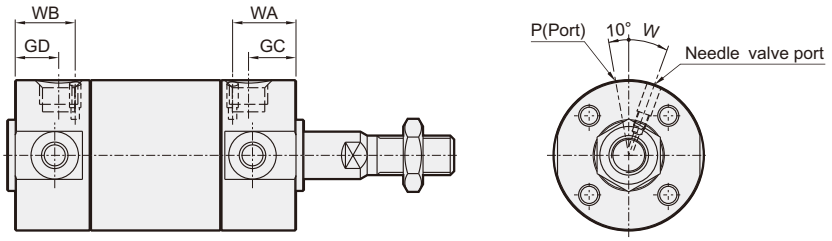
ϕ32~ϕ63



A-A

With adjustable cushion

A



Unit: mm

Code / Tube I.D.	Standard stroke range	Long stroke range	A	AL	B1	C	D	E	F	GA	GB	GC	GD	H	H1	I	J	K	KA
20	~200	201~350	18	15.5	13	14	8	12	2	12	12 (12)	12	12 (12)	35	5	26	M4×0.7×7 dp	4	6
25	~300	301~400	22	19.5	17	16.5	10	14	2	12	12 (12)	12	12 (12)	40	6	31	M5×0.8×7.5 dp	5	8
32	~300	301~450	22	19.5	17	20	12	18	2	12	11 (12)	12	11 (12)	40	6	38	M5×0.8×8 dp	5.5	10
40	~300	301~800	30	27	22	26	16	25	2	13	12 (13)	13	10 (13)	50	8	47	M6×1.0×12 dp	6	14
50	~300	301~1200	35	32	26	32	20	30	2	14	13 (13)	14	12 (14)	58	11	58	M8×1.25×16 dp	7	18
63	~300	301~1200	35	32	26	38	20	32	2	14	13 (13)	14	12 (14)	58	11	72	M10×1.5×16 dp	7	18

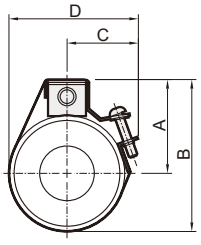
Code / Tube I.D.	MM	NA	P	S	TA	TB	TC	TD H9	TE	TF	TG	W	WA	WB	ZZ
20	M8×1.25	24	Rc1/8	69 (77)	11	11 (11)	M5×0.8	$8^{+0.036}_{0}$	4	0.5	5.5	40°	14	14 (14)	106 (114)
25	M10×1.25	29	Rc1/8	69 (77)	11	11 (11)	M6×0.75	$10^{+0.036}_{0}$	5	1	6.5	40°	14	13 (13)	111 (119)
32	M10×1.25	36	Rc1/8	71 (79)	11	10 (11)	M8×1.0	$12^{+0.043}_{0}$	5.5	1.25	7.5	30°	14	13 (13)	113 (121)
40	M14×1.5	44	Rc1/8	78 (87)	12	10 (12)	M10×1.25	$14^{+0.043}_{0}$	6	1.25	8	20°	16	15 (16)	130 (139)
50	M18×1.5	55	Rc1/4	90 (102)	13	12 (13)	M12×1.25	$16^{+0.043}_{0}$	7.5	2	10	20°	16	16 (16)	150 (162)
63	M18×1.5	69	Rc1/4	90 (102)	13	12 (13)	M14×1.5	$18^{+0.043}_{0}$	11.5	3	14.5	20°	18	18 (18)	150 (162)

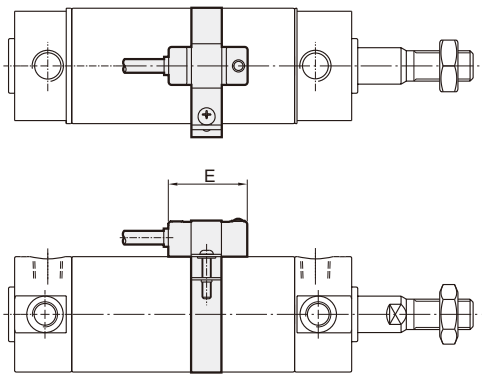
( ): Dimension for long stroke.

Installation of sensor switch

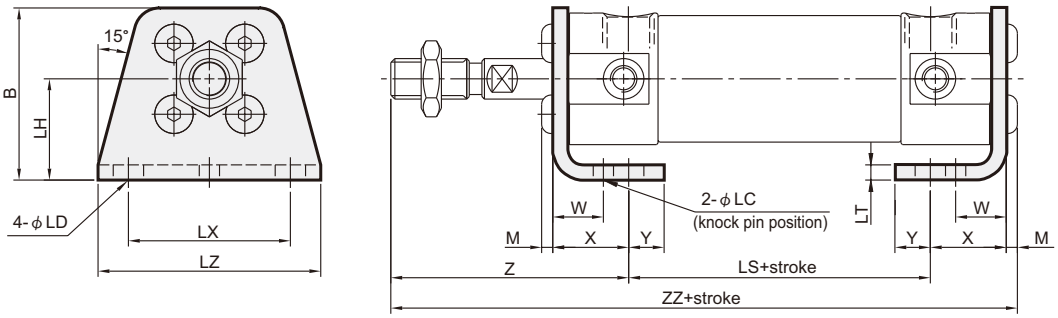
Sensor switch: RCA
Sensor switch band: BGA**

Code / Tube I.D.	A	B	C	D	E
20	18	31	25	38	26
25	20	35	27	42	26
32	24	43	31	50	26
40	29	53	36	60	26
50	34	63	41	70	26
63	41	77	48	84	26





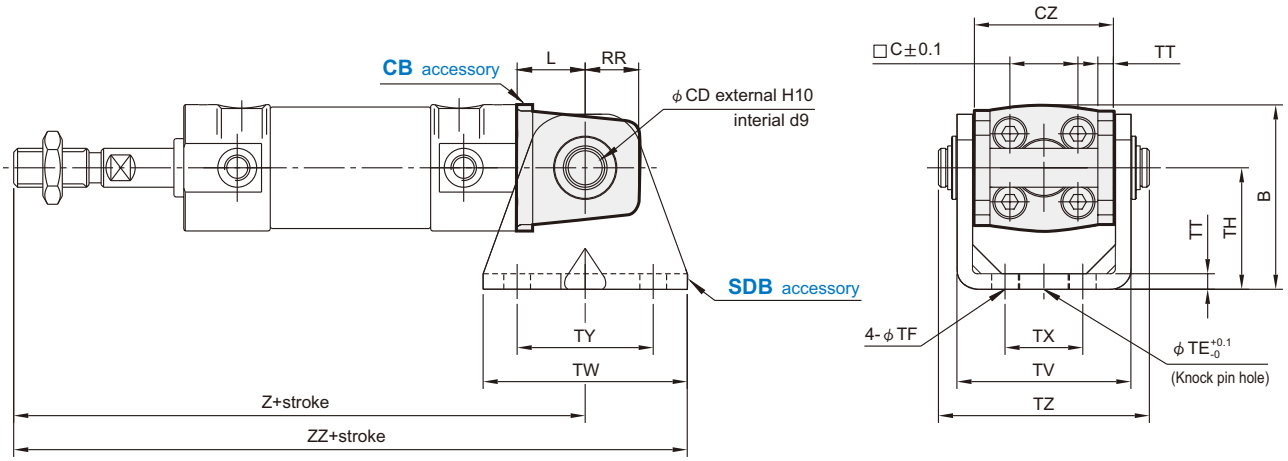
LB



Code / Tube I.D.	B	LC	LD	LH	LS	LT	LX	LZ	M	W	X	Y	Z	ZZ
20	34	4	6	20	45 (53)	3	32	44	2.2	10	15	7	47	109.2 (117.2)
25	38.5	4	6	22	45 (53)	3	36	49	2.8	10	15	7	52	114.8 (122.8)
32	45	4	6.6	25	45 (53)	3	44	58	2.8	10	16	8	53	116.8 (124.8)
40	54.5	4	6.6	30	51 (60)	3	54	71	3.3	10	16.5	8.5	63.5	134.3 (143.3)
50	70.5	5	9	40	55 (67)	4.5	66	86	4.4	17.5	22	11	75.5	156.9 (168.9)
63	82.5	5	11	45	55 (67)	4.5	82	106	5.5	17.5	22	13	75.5	158.0 (170.0)

( ): Dimension for long stroke.

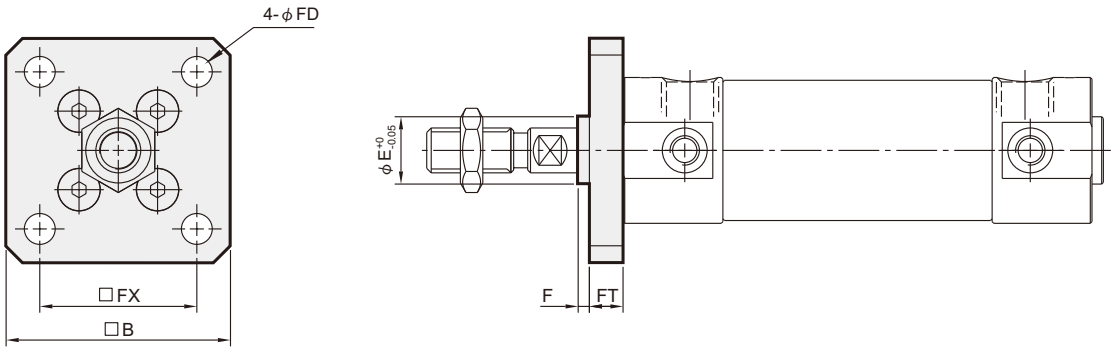
CB SDB+Pin (Extra purchase)



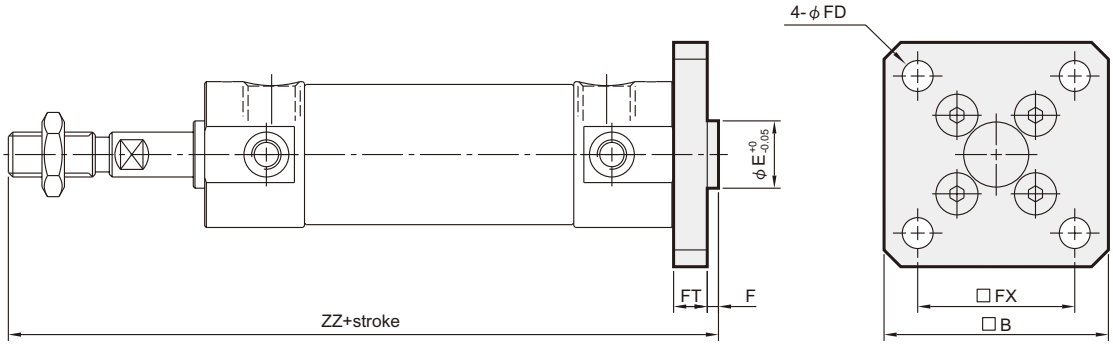
Code / Tube I.D.	B	CD	CZ	L	RR	TE	TF	TH	TT	TV	TW	TX	TY	TZ	Z	ZZ
20	38	8	29	14	11	10	5.5	25	3.2	35.8	42	16	28	43.4	118 (126)	139 (147)
25	45.5	10	33	16	13	10	5.5	30	3.2	39.8	42	20	28	48	125 (133)	146 (154)
32	54	12	40	20	15	10	6.6	35	4.5	49.4	48	22	28	59.4	131 (139)	155 (163)
40	63.5	14	49	22	18	10	6.6	40	4.5	58.4	56	30	30	71.4	150 (159)	178 (187)
50	79	16	60	25	20	20	9	50	6	72.4	64	36	36	86	173 (185)	205 (217)
63	96	18	74	30	22	20	11	60	8	90.4	74	46	46	105.4	178 (190)	215 (227)

( ): Dimension for long stroke.

FAC



FBC

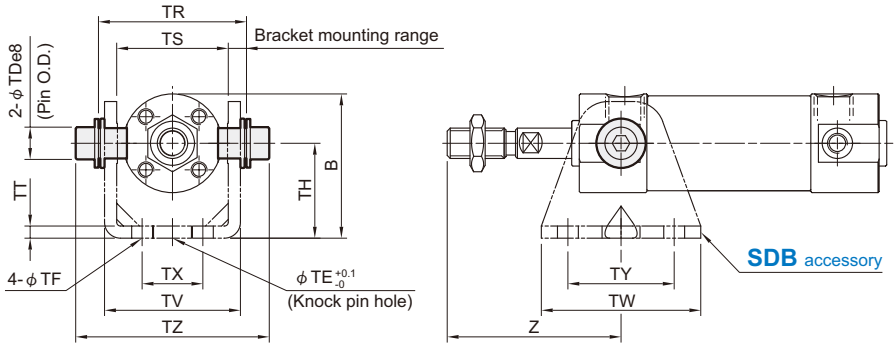


Code / Tube I.D.	B	E	F	FX	FD	FT	ZZ
20	40	12	2	28	5.5	6	112 (120)
25	44	14	2	32	5.5	7	118 (126)
32	53	18	2	38	6.6	7	120 (128)
40	61	25	2	46	6.6	8	138 (147)
50	76	30	2	58	9	9	159 (171)
63	92	32	2	70	11	9	159 (171)

( ): Dimension for long stroke.

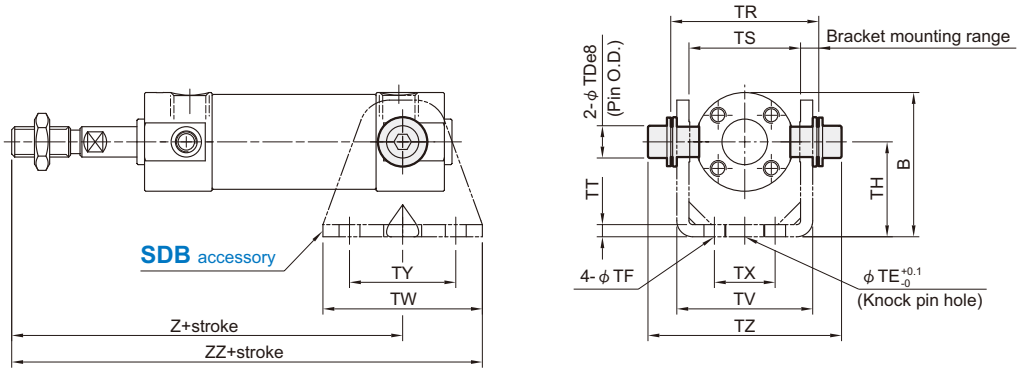
TA

Front trunnion



TB

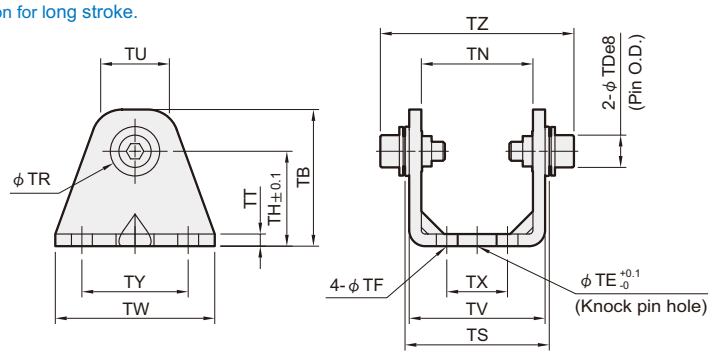
Rear trunnion



Code / Tube I.D.	B	TDe8	TE	TF	TH	TR	TS	TT	TV	TW	TX	TY	TZ	Front	Rear	
														Z	Z	ZZ
20	38	8 -0.025 -0.047	10	5.5	25	39	29	3.2	35.8	42	16	28	51	46	93 (101)	114 (122)
25	45.5	10 -0.025 -0.047	10	5.5	30	43	33	3.2	39.8	42	20	28	57.9	51	98 (106)	119 (127)
32	54	12 -0.032 -0.059	10	6.6	35	53.5	40	4.5	49.4	48	22	28	73.3	51	101 (108)	125 (132)
40	63.5	14 -0.032 -0.059	10	6.6	40	64.5	49	4.5	58.4	56	30	30	89.5	62	118 (125)	146 (153)
50	79	16 -0.032 -0.059	20	9	50	80	60	6	72.4	64	36	36	109.2	71	136 (147)	168 (179)
63	96	18 -0.032 -0.059	20	11	60	98	74	8	90.4	74	46	46	131	71	136 (147)	173 (184)

( ): Dimension for long stroke.

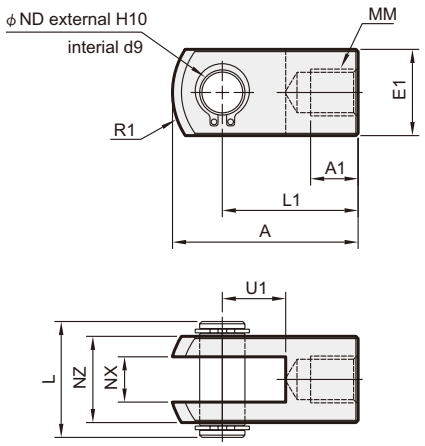
SDB



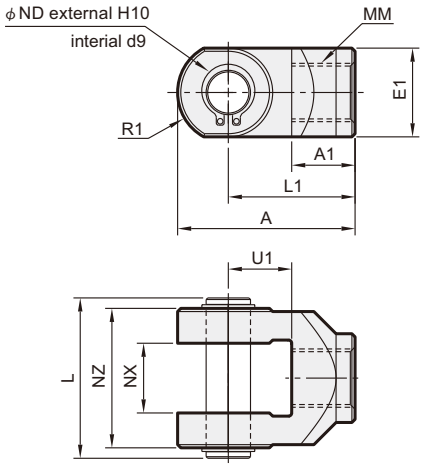
Code / Tube I.D.	TB	TE	TF	TH	TN	TR	TT	TU	TV	TW	TX	TY	TS	TZ	Applicable pin O.D.
20	36	10	5.5	25	29.3	13	3.2	18.1	35.8	42	16	28	38	51	8d9 -0.040 -0.076
25	43	10	5.5	30	33.1	15	3.2	20.7	39.8	42	20	28	42	57.9	10d9 -0.040 -0.076
32	50	10	6.6	35	40.4	17	4.5	23.6	49.4	48	22	28	52.4	73.3	12d9 -0.050 -0.093
40	58	10	6.6	40	49.2	21	4.5	27.3	58.4	56	30	30	63.4	89.5	14d9 -0.050 -0.093
50	70	20	9	50	60.4	24	6	29.7	72.4	64	36	36	78.8	109.2	16d9 -0.050 -0.093
63	82	20	11	60	74.6	26	8	34.3	90.4	74	46	46	76.6	131	18d9 -0.050 -0.093

Y connector

ϕ20~ϕ32

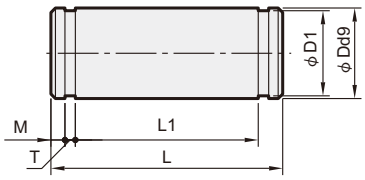


ϕ40~ϕ63



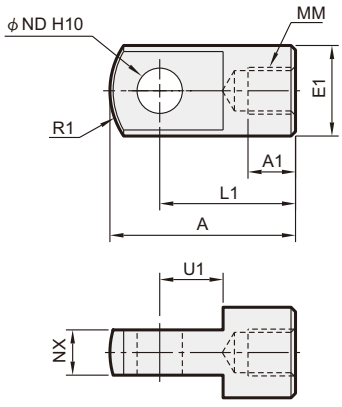
Code / Tube I.D.	A	A1	E1	L	L1	MM	R1	U1	ND	NX	NZ
20	34	8.5	ϕ16	21	25	M8×1.25	14	11.5	8	$8^{+0.4}_{+0.2}$	15.88
25,32	41	10.5	ϕ20	25.6	30	M10×1.25	18	14	10	$10^{+0.4}_{+0.2}$	19.05
40	42	16	ϕ22	41.6	30	M14×1.5	12	14	10	$18^{+0.5}_{+0.3}$	36
50,63	56	20	ϕ28	50.6	40	M18×1.5	16	20	14	$22^{+0.5}_{+0.3}$	44

Pin

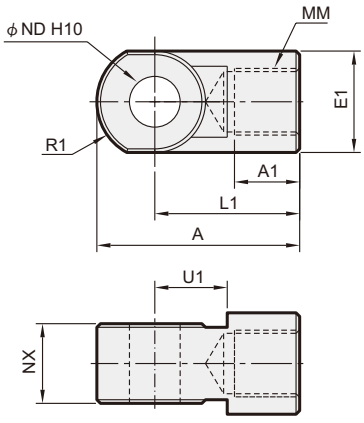


I connector

ϕ20~ϕ32



ϕ40~ϕ63



Code / Tube I.D.	A	A1	E1	L1	MM	R1	U1	ND_{H10}	NX
20	34	8.5	ϕ16	25	M8×1.25	14	11.5	$8^{+0.058}_{0}$	$8^{-0.2}_{-0.4}$
25,32	41	10.5	ϕ20	30	M10×1.25	18	14	$10^{+0.058}_{0}$	$10^{-0.2}_{-0.4}$
40	42	14	ϕ22	30	M14×1.5	12	14	$10^{+0.058}_{0}$	$18^{-0.3}_{-0.5}$
50,63	56	18	ϕ28	40	M18×1.5	16	20	$14^{+0.070}_{0}$	$22^{-0.3}_{-0.5}$

Order example

PIN – MCCG – 32 – CB – P

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

for CB

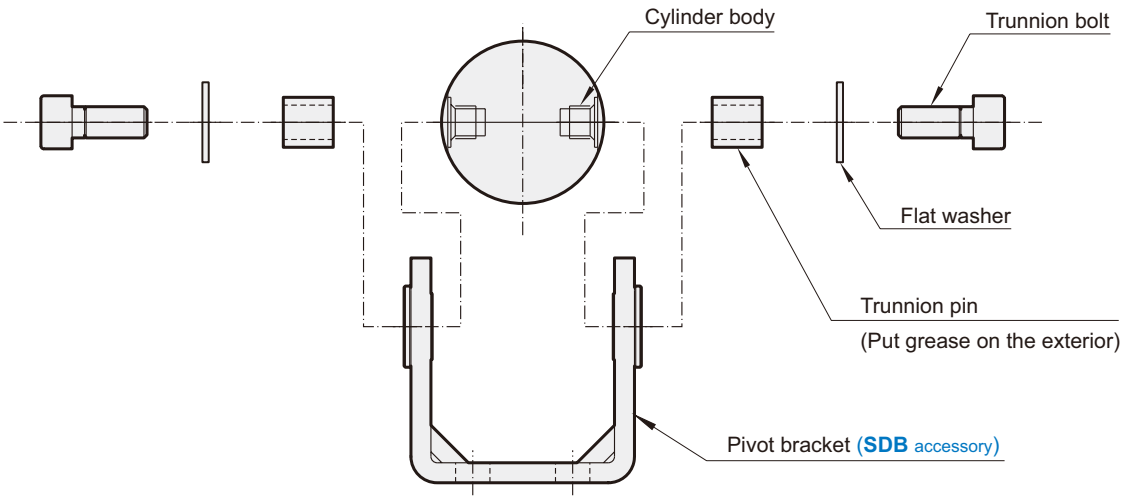
Code / Tube I.D.	Dd9	D1	L	L1	M	T	Snap ring
20	$8^{-0.040}_{-0.076}$	7.6	43.4	38.6	1.5	0.9	STW-8
25	$10^{-0.040}_{-0.076}$	9.6	48	42.6	1.55	1.15	STW-10
32	$12^{-0.050}_{-0.093}$	11.5	59.4	54	1.55	1.15	STW-12
40	$14^{-0.050}_{-0.093}$	13.4	71.4	65	2.05	1.15	STW-14
50	$16^{-0.050}_{-0.093}$	15.2	86	79.6	2.05	1.15	STW-16
63	$18^{-0.050}_{-0.093}$	17.0	105.4	97.8	2.45	1.35	STW-18

for Y & I connector

Code / Tube I.D.	Dd9	D1	L	L1	M	T	Snap ring
20	$8^{-0.04}_{-0.08}$	7.6	21	16.2	1.5	0.9	STW-8
25,32	$10^{-0.04}_{-0.08}$	9.6	25.6	20.2	1.55	1.15	STW-10
40	$10^{-0.04}_{-0.08}$	9.6	41.6	36.2	1.55	1.15	STW-10
50,63	$14^{-0.05}_{-0.09}$	13.4	50.6	44.2	2.05	1.15	STW-14

Trunnion

Follow the procedures below when mounting a pivot bracket on the trunnion.



Clevis

Follow the procedures below when mounting a pivot bracket on the clevis.