



Special spec



Rod end shape



Technical data



Caution for safety  
(Read before installing)



### Table for standard stroke

Tube I.D.	Stroke (inch)	Long stroke (inch)	Max. stroke (inch)
20: 3/4"	1, 2, 3, 4, 5, 6, 8	8.01~14	48
25: 1"	1, 2, 3, 4, 5, 6, 8, 10, 12	12.01~16	
32: 1 1/4"		12.01~18	
40: 1 1/2"		12.01~32	
50: 2"		12.01~48	19
63: 2 1/2"		12.01~19	

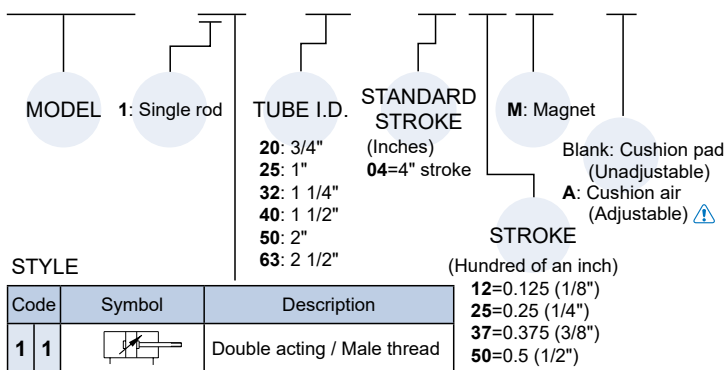
\* Intermediate stroke are available, please contact us.

### Specification

Model	MCCN						
Acting type	Double acting						
Tube I.D. (inch)	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	
Port size	NPT1/8				NPT1/4		
Medium	Air						
Max. operating perssure	1 MPa						
Min. operating perssure	0.05 MPa						
Proof pressure	1.5 MPa						
Lubrication	Not required						
Ambient temperature	-5~+60°C (No freezing)						
Available speed range	50~500 mm/sec						
Max. allowable kinetic energy (J)	Cushion pad	0.07	0.10	0.17	0.3	0.5	0.85
	Cushion air	0.09	0.14	0.23	0.45	0.85	1.23
Sensor switch	RDC, RQC, RCM						
Sensor switch band	R*C	BKC-1 (Not for R*CV angle cable)					
	RCM	BMG20	BMG25	BMG32	BMG40	BMG50	BMG63

### Order example

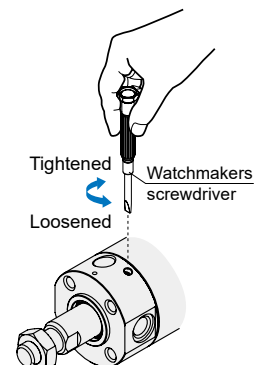
**MCCN – 11 – 40 – 0425M – A**



### Caution

For (A) Cushion air (Adjustable)

- 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.
- If the needle valve loosen excessively, the buffer doesn't take effect and the lifetime of cylinder would be shortened.

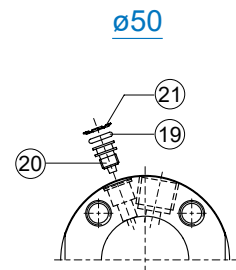
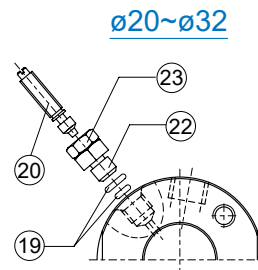
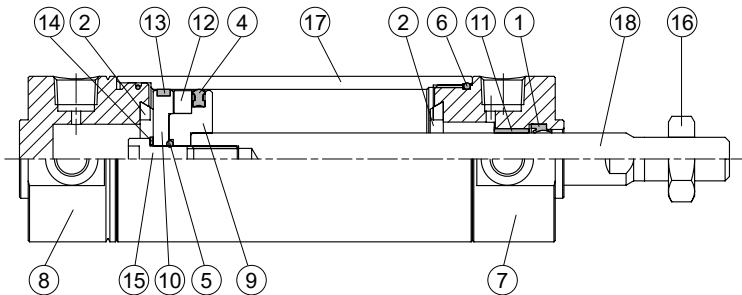




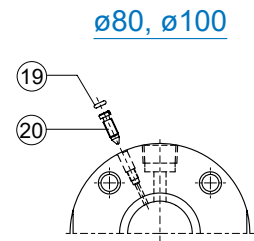
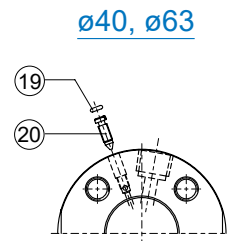
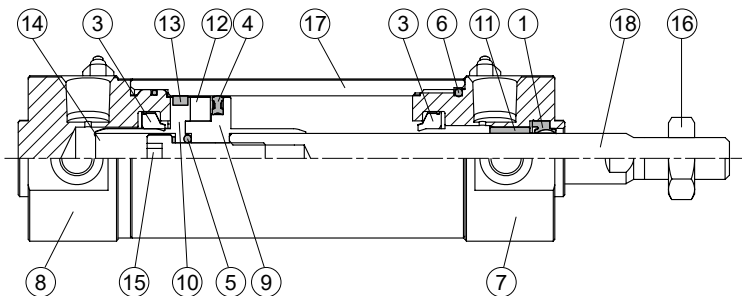
## ROUND CYLINDER

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### Cushion pad Unadjustable



### Cushion air Adjustable



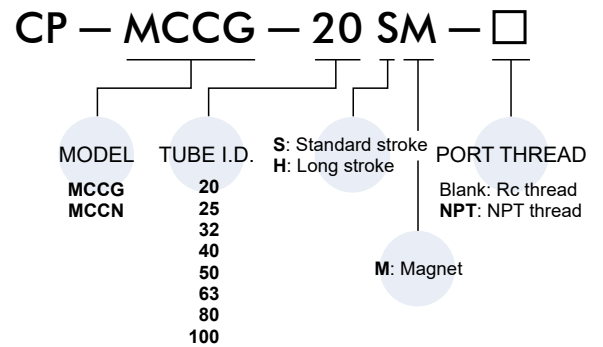
### Material

A: Component parts, B: Repair kits

No.	Cushion		Part name	Material	Q'y	A	B	Note
	Pad	Air				(inclusion)		
1	●	●	Rod packing	NBR	1	●	●	
2	●	●	Cushion pad	NBR	2	●	●	
3	●	●	Cushion pad	NBR	2	●	●	
4	●	●	Piston packing	NBR	1	●	●	
5	●	●	O-ring	NBR	1	●	●	
6	●	●	O-ring	NBR	1 or 2	●	●	ø50~100 (Q'y=2)
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 ø20~ø32
13	●	●	Wear ring	Resin	1	●		
14	●	●	Washer	Carbon steel	1	●		ø20 without
15	●	●	Piston bolt	Carbon steel	1	●		
16	●	●	Nut	Carbon steel	1	●		
17	●	●	Cylinder tube	Aluminum alloy	1			
18	●	●	Piston rod	Carbon steel	1			ø20~25 stainless steel
19	●	●	O-ring	NBR	4 or 2			ø40~80 (Q'y=2)
20	●	●	Needle valve	Stainless steel	2			*1
21	●	●	Needle valve packing	Carbon steel	2			only for ø50
22	●	●	Needle valve fixed nut	Stainless steel	2			only for ø20~32
23	●	●	Hex nut	Carbon steel	2			only for ø20~32

\*1. ø50: Copper, ø63~100: Carbon steel

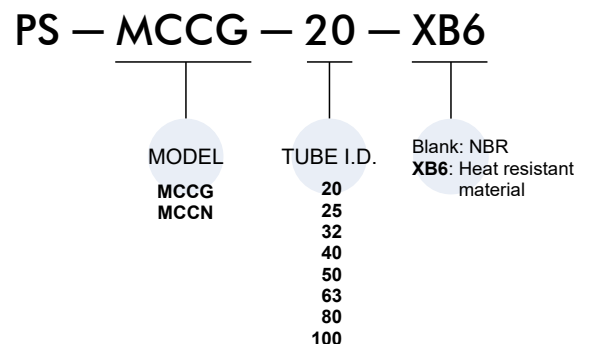
### Order example of component parts

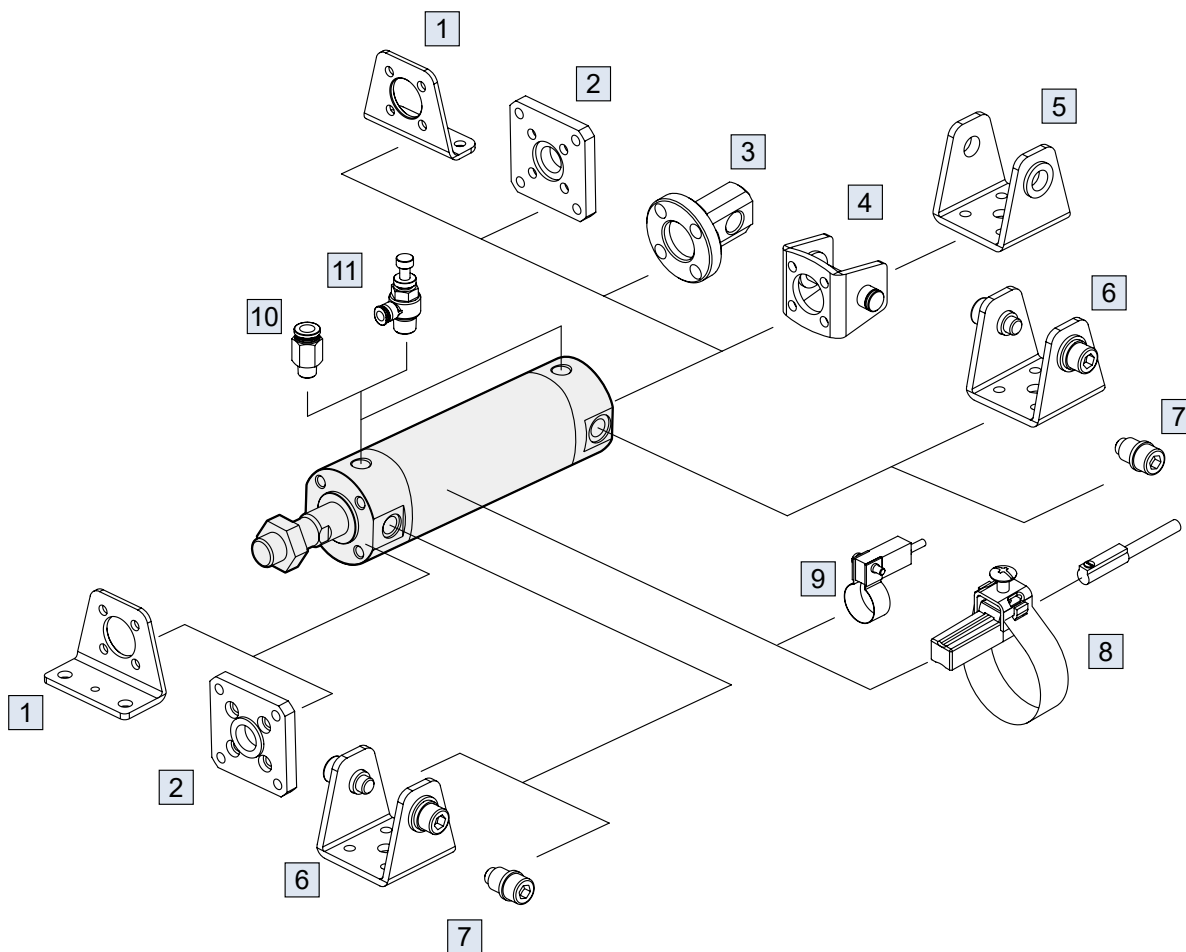


\* MCCN only be used for NPT.

\* Order example for G thread, please consult us.

### Order example of repair kits

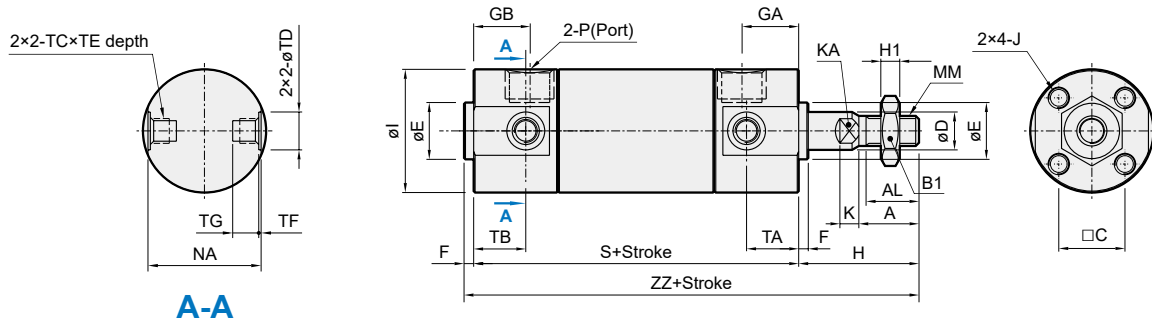




No.	Accessories	Material	Page link
1	Mounting accessories LB	Carbon steel	<a href="#">↗</a>
2	Mounting accessories FAC/FBC	Carbon steel	<a href="#">↗</a>
3	Mounting accessories CA	Carbon steel	<a href="#">↗</a>
4	Mounting accessories CB+PIN	Carbon steel	<a href="#">↗</a> , <a href="#">↗</a> , <a href="#">↗</a>
5	Mounting accessories SDB	Carbon steel	<a href="#">↗</a> , <a href="#">↗</a>
6	Mounting accessories SDB-R/H	Carbon steel	<a href="#">↗</a> , <a href="#">↗</a>
7	Mounting accessories TA/TB	Carbon steel	<a href="#">↗</a> , <a href="#">↗</a>
8	Sensor switch R*C+BKC-1	—	<a href="#">↗</a>
9	Sensor switch RCM+BMG**	—	<a href="#">↗</a>
10	Fitting PC (PISCO)	—	<a href="#">↗</a>
11	Speed controller JSC (PISCO)	—	<a href="#">↗</a>

## ROUND CYLINDER

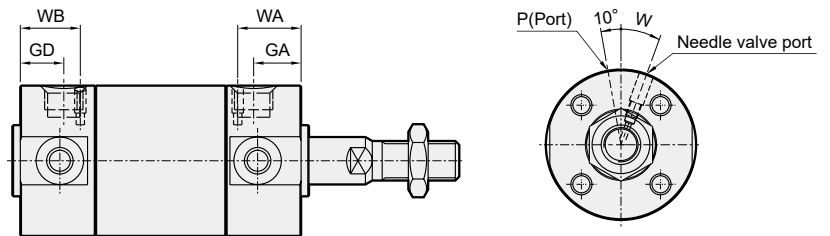
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A-A

### Cushion air (Adjustable)

A



Unit: inch

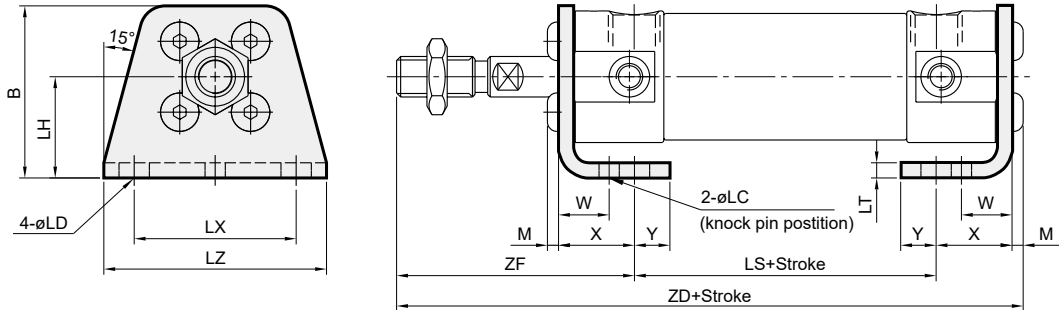
Code Tube I.D.	Standard stroke range	Long stroke range	A	AL	B1	C	D	E	F	GA	GB	GD	H	H1	I	J	K
20	~ 8	8.01 ~ 14	0.50	0.44	0.44	0.55	0.315	0.472 <sup>+0</sup> <sub>-0.002</sub>	0.08	0.47	0.47 (0.47)	0.47 (0.47)	1	0.16	1.02	#8-32×0.28 dp	0.157
25	~12	12.01 ~ 16	0.50	0.44	0.50	0.65	0.394	0.551 <sup>+0</sup> <sub>-0.002</sub>	0.08	0.47	0.47 (0.47)	0.47 (0.47)	1.12	0.19	1.22	#10-32×0.30 dp	0.197
32	~12	12.01 ~ 18	0.75	0.69	0.69	0.79	0.472	0.709 <sup>+0</sup> <sub>-0.002</sub>	0.08	0.47	0.43 (0.47)	0.43 (0.47)	1.63	0.26	1.50	#10-32×0.30 dp	0.217
40	~12	12.01 ~ 32	0.75	0.69	0.69	1.02	0.630	0.984 <sup>+0</sup> <sub>-0.002</sub>	0.08	0.51	0.47 (0.51)	0.39 (0.51)	1.63	0.26	1.85	1/4-28×0.47 dp	0.3
50	~12	12.01 ~ 48	0.88	0.84	0.75	1.26	0.787	1.181 <sup>+0</sup> <sub>-0.002</sub>	0.08	0.55	0.51 (0.51)	0.47 (0.55)	2.07	0.32	2.28	5/16-24×0.63 dp	0.276
63	~12	12.01 ~ 27.5	0.88	0.84	0.75	1.50	0.787	1.260 <sup>+0</sup> <sub>-0.002</sub>	0.08	0.55	0.51 (0.51)	0.47 (0.55)	2.07	0.32	2.83	3/8-24×0.63 dp	0.276

Code Tube I.D.	KA	MM	NA	P	S	TA	TB	TC	TD <sub>H9</sub>	TE	TF	TG	W	WA	WB	ZZ
20	0.24	1/4-28 UNF	0.94	NPT1/8	2.72 (3.03)	0.43	0.43 (0.43)	M5×0.8	0.315	0.157	0.020	0.217	40°	0.551	0.551 (0.551)	3.80 (4.11)
25	0.31	5/16-24 UNF	1.14	NPT1/8	2.72 (3.03)	0.43	0.43 (0.43)	M6×0.75	0.394	0.197	0.039	0.256	40°	0.551	0.511 (0.511)	3.92 (4.23)
32	0.39	7/16-20 UNF	1.42	NPT1/8	2.80 (3.11)	0.43	0.39 (0.43)	M8×1.0	0.472	0.217	0.049	0.295	30°	0.551	0.511 (0.511)	4.51 (4.82)
40	0.55	7/16-20 UNF	1.73	NPT1/8	3.07 (3.43)	0.47	0.39 (0.47)	M10×1.25	0.551	0.236	0.049	0.315	20°	0.629	0.590 (0.629)	4.78 (5.14)
50	0.71	1/2-20 UNF	2.17	NPT1/4	3.54 (4.02)	0.51	0.47 (0.51)	M12×1.25	0.630	0.295	0.079	0.394	20°	0.629	0.629 (0.629)	5.69 (6.17)
63	0.71	1/2-20 UNF	2.72	NPT1/4	3.54 (4.02)	0.51	0.47 (0.51)	M14×1.5	0.709	0.453	0.118	0.571	20°	0.708	0.708 (0.708)	5.69 (6.17)

( ): Dimension for long stroke.

ROUND CYLINDER

LB

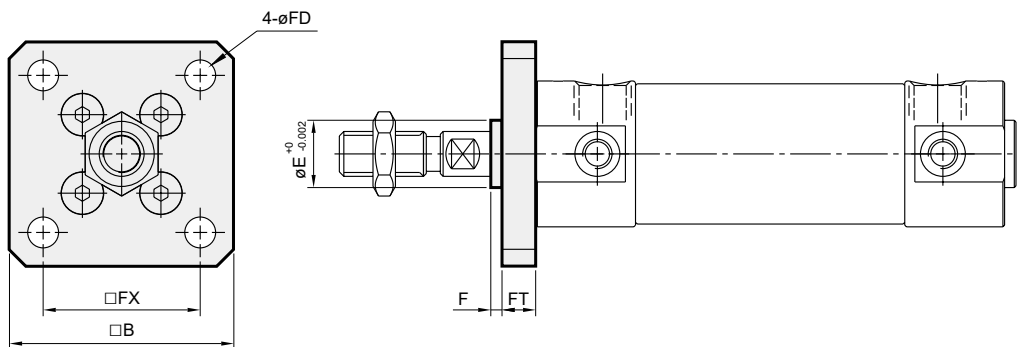


Unit: inch

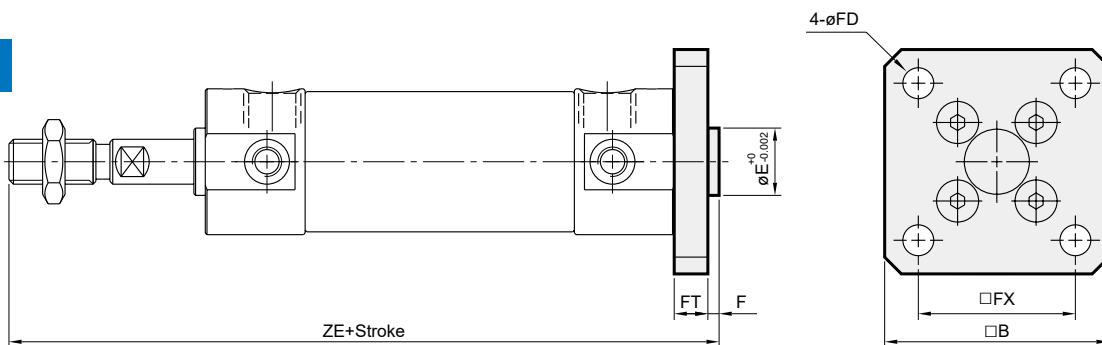
Code Tube I.D.	B	LC	LD	LH	LS	LT	LX	LZ	M	W	X	Y	ZD	ZF
20	1.34	0.16	0.24	0.79	1.78 (2.09)	0.12	1.26	1.73	0.09	0.39	0.59	0.28	3.93 (4.24)	1.47
25	1.52	0.16	0.24	0.87	1.78 (2.09)	0.12	1.42	1.93	0.11	0.39	0.59	0.28	4.07 (4.38)	1.59
32	1.77	0.16	0.26	0.98	1.78 (2.09)	0.12	1.73	2.28	0.11	0.39	0.63	0.31	4.66 (4.97)	2.14
40	2.15	0.16	0.26	1.18	2.01 (2.37)	0.12	2.13	2.80	0.13	0.39	0.65	0.33	4.95 (5.31)	2.16
50	2.78	0.20	0.35	1.57	2.16 (2.64)	0.18	2.60	3.39	0.17	0.69	0.87	0.43	5.96 (6.44)	2.76
63	3.25	0.20	0.43	1.77	2.16 (2.64)	0.18	3.23	4.17	0.22	0.69	0.87	0.51	6.01 (6.49)	2.76

( ): Dimension for long stroke.

FAC



FBC



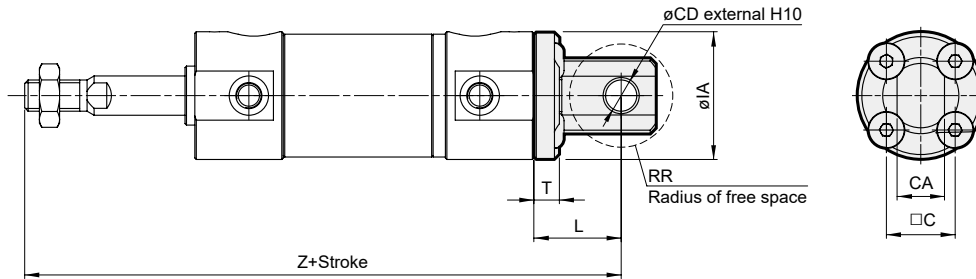
Unit: inch

Code Tube I.D.	B	E	F	FX	FD	FT	ZE
20	1.57	0.472	0.08	1.10	0.22	0.24	4.04 (4.35)
25	1.73	0.551	0.08	1.26	0.22	0.28	4.20 (4.51)
32	2.09	0.709	0.08	1.50	0.26	0.28	4.79 (5.10)
40	2.40	0.984	0.08	1.81	0.26	0.31	5.09 (5.45)
50	2.99	1.181	0.08	2.28	0.35	0.35	6.04 (6.52)
63	3.62	1.260	0.08	2.76	0.43	0.35	6.04 (6.52)

( ): Dimension for long stroke.

## ROUND CYLINDER

### CA

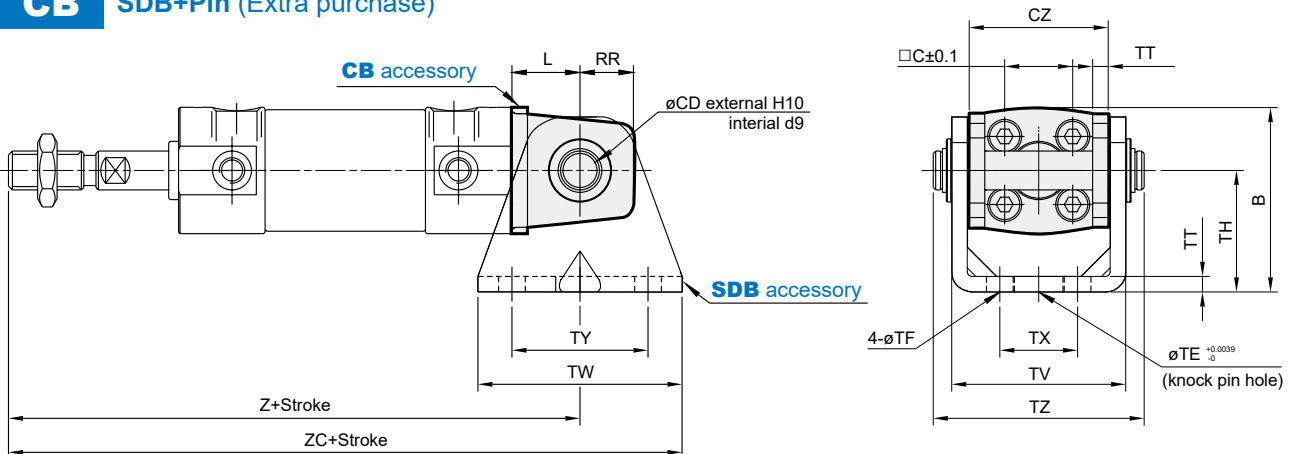


Unit: inch

Code Tube I.D.	C	CA	CD	IA	L	RR	T	Z
20	0.55	0.38	0.25	1.02	0.70	0.42	0.20	4.42(4.73)
25	0.65	0.38	0.25	1.22	0.68	0.75	0.21	4.52(4.83)
32	0.79	0.5	0.25	1.49	1.07	0.60	0.47	5.50(5.81)
40	1.02	0.62	0.375	1.85	0.88	0.65	0.25	5.58(5.94)
50	1.26	0.75	0.375	2.28	0.91	0.38	0.29	6.52(7)
63	1.5	0.75	0.375	2.83	0.91	0.38	0.29	6.52(7)

( ): Dimension for long stroke.

### CB SDB+Pin (Extra purchase)

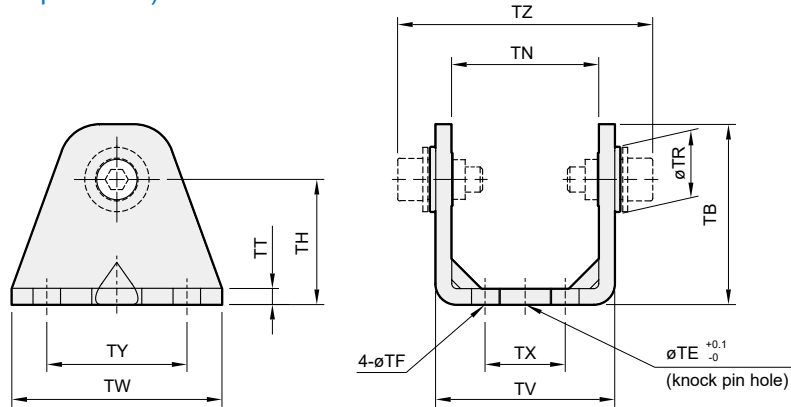


Unit: inch

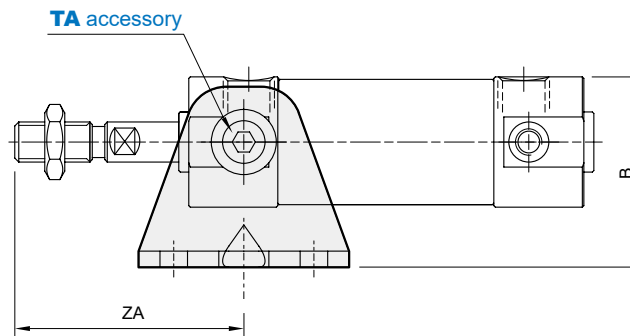
Code Tube I.D.	B	CD	CZ	L	RR	TE	TF	TH	TT	TV	TW	TX	TY	TZ	Z	ZC
20	1.50	0.315	1.14	0.55	0.43	0.394	0.22	0.98	0.13	1.41	1.65	0.63	1.10	1.71	4.27 (4.58)	5.10 (5.41)
25	1.79	0.394	1.30	0.63	0.51	0.394	0.22	1.18	0.13	1.57	1.65	0.79	1.10	1.89	4.47 (4.78)	5.30 (5.61)
32	2.13	0.472	1.57	0.79	0.59	0.394	0.26	1.38	0.18	1.94	1.89	0.87	1.10	2.34	5.22 (5.53)	6.16 (6.47)
40	2.50	0.551	1.93	0.87	0.71	0.394	0.26	1.57	0.18	2.30	2.20	1.18	1.18	2.81	5.57 (5.93)	6.67 (7.03)
50	3.11	0.630	2.36	0.98	0.79	0.787	0.35	1.97	0.24	2.85	2.52	1.42	1.42	3.39	6.59 (7.07)	7.85 (8.33)
63	3.78	0.709	2.91	1.18	0.87	0.787	0.43	2.36	0.31	3.56	2.91	1.81	1.81	4.15	6.79 (7.27)	8.25 (8.73)

( ): Dimension for long stroke.

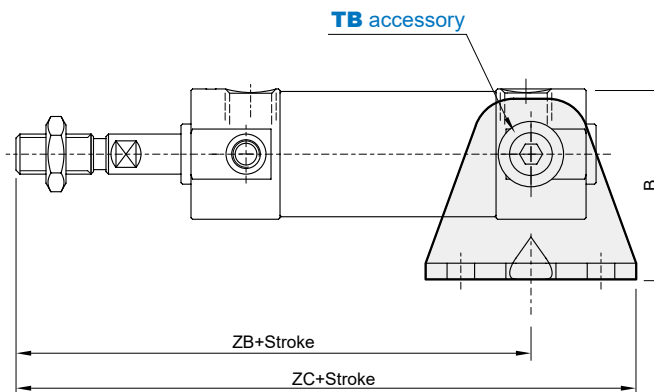
**SDB** TA/TB (Extra purchase)



**SDB-R**



**SDB-H**



Unit: inch

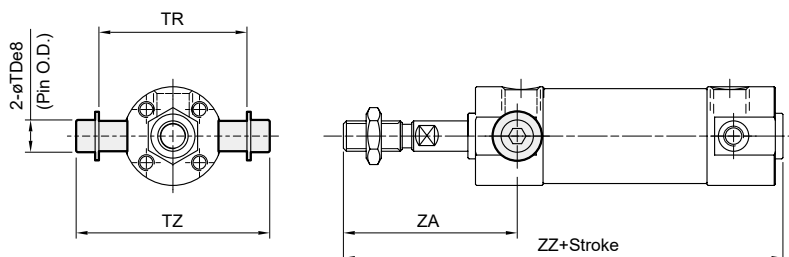
Code Tube I.D.	B	TB	TE	TF	TH	TN	TR	TT	TV	TW	TX	TY	TZ	ZA	ZB	ZC	Applicable pin O.D.
20	1.50	1.42	0.394	0.22	0.98	1.15	0.55	0.13	1.41	1.65	0.63	1.10	2.00	1.43	3.29(3.6)	3.80(4.11)	0.315 -0.0016 -0.0030
25	1.79	1.69	0.394	0.22	1.18	1.30	0.63	0.13	1.57	1.65	0.79	1.10	2.29	1.55	3.41(3.72)	3.92(4.23)	0.394 -0.0016 -0.0030
32	2.13	1.97	0.394	0.26	1.38	1.59	0.71	0.18	1.94	1.89	0.87	1.10	2.81	2.06	4.04(4.31)	4.51(4.82)	0.472 -0.0020 -0.0037
40	2.50	2.28	0.394	0.26	1.57	1.94	0.87	0.18	2.30	2.20	1.18	1.18	3.48	2.10	4.31(4.59)	4.78(5.14)	0.551 -0.0020 -0.0037
50	3.11	2.76	0.787	0.35	1.97	2.38	0.98	0.24	2.85	2.52	1.42	1.42	4.29	2.58	5.14(5.58)	5.69(6.17)	0.630 -0.0020 -0.0037
63	3.78	3.23	0.787	0.43	2.36	2.94	1.06	0.31	3.56	2.91	1.81	1.81	5.15	2.58	5.14(5.58)	5.69(6.17)	0.709 -0.0020 -0.0037

( ): Dimension for long stroke.

## ROUND CYLINDER

Mindman

### TA Front trunnion

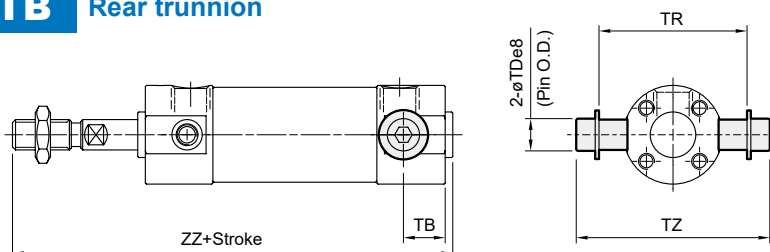


Unit: inch

Code Tube I.D.	TB	TDe8	TR	TZ
20	0.43(0.43)	0.315	1.54	2.00
25	0.43(0.43)	0.394	1.69	2.29
32	0.39(0.43)	0.472	2.11	2.81
40	0.39(0.47)	0.551	2.54	3.48
50	0.47(0.51)	0.630	3.15	4.29
63	0.47(0.51)	0.709	3.86	5.15

( ): Dimension for long stroke.

### TB Rear trunnion

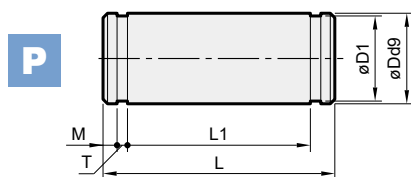


Unit: inch

Code Tube I.D.	ZA	ZB	ZZ
20	1.43	3.29 (3.60)	3.80 (4.11)
25	1.55	3.41 (3.72)	3.92 (4.23)
32	2.06	4.04 (4.31)	4.51 (4.82)
40	2.10	4.31 (4.59)	4.78 (5.14)
50	2.58	5.14 (5.58)	5.69 (6.17)
63	2.58	5.14 (5.58)	5.69 (6.17)

( ): Dimension for long stroke.

### PIN



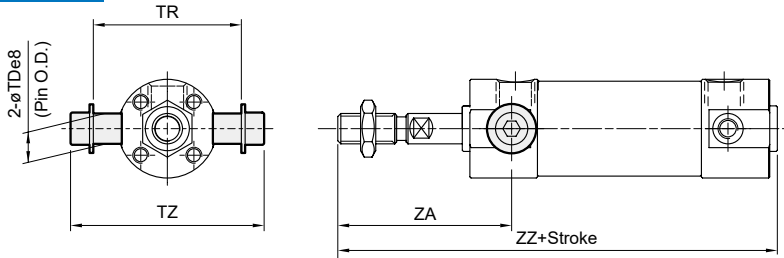
### for CB

Unit: inch

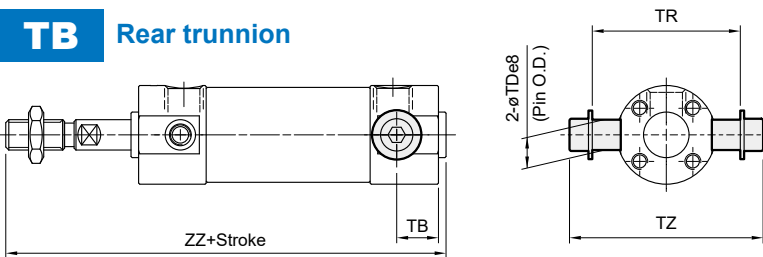
Code Tube I.D.	Dd9	D1	L	L1	M	T	Snap ring
20	0.315 <sup>+0.0016</sup> <sub>-0.0030</sub>	0.30	1.71	1.52	0.06	0.04	STW-8
25	0.394 <sup>+0.0016</sup> <sub>-0.0030</sub>	0.38	1.89	1.68	0.06	0.05	STW-10
32	0.472 <sup>+0.0020</sup> <sub>-0.0037</sub>	0.45	2.34	2.13	0.06	0.05	STW-12
40	0.551 <sup>+0.0020</sup> <sub>-0.0037</sub>	0.53	2.81	2.56	0.08	0.05	STW-14
50	0.630 <sup>+0.0020</sup> <sub>-0.0037</sub>	0.60	3.39	3.13	0.08	0.05	STW-16
63	0.709 <sup>+0.0020</sup> <sub>-0.0037</sub>	0.67	4.15	3.85	0.10	0.05	STW-18

**ROUND CYLINDER**

**TA Front trunnion**



**TB Rear trunnion**

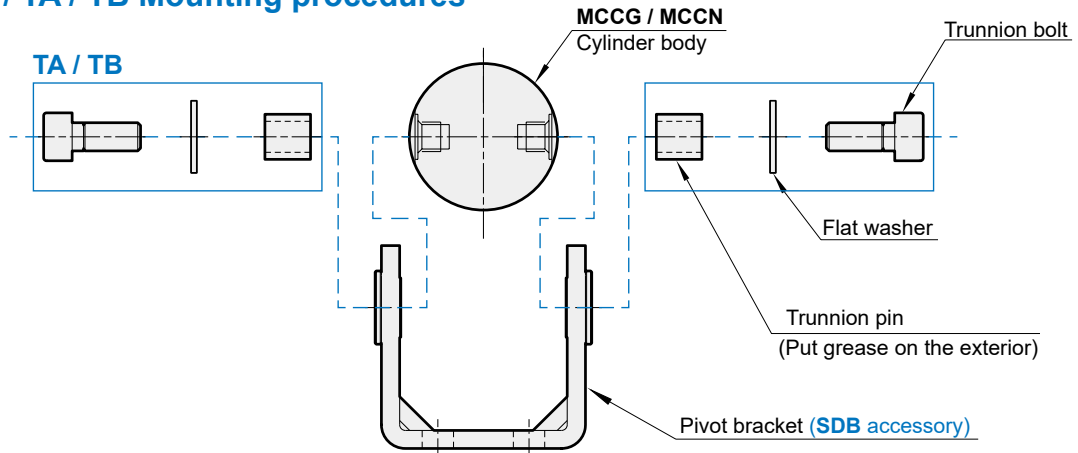


Code Tube I.D.	TB	TDe8	TR	TZ	ZA	ZZ
20	11(11)	8 <sup>+0.025</sup> <sub>-0.047</sub>	39	51	46	106 (114)
25	11(11)	10 <sup>+0.025</sup> <sub>-0.047</sub>	43	58.2	51	111 (119)
32	10(11)	12 <sup>+0.032</sup> <sub>-0.059</sub>	53.5	71.5	51	113 (121)
40	10(12)	14 <sup>+0.032</sup> <sub>-0.059</sub>	64.5	88.5	62	130 (139)
50	12(13)	16 <sup>+0.032</sup> <sub>-0.059</sub>	80	109	71	150 (162)
63	12(13)	18 <sup>+0.032</sup> <sub>-0.059</sub>	98	131	71	150 (162)

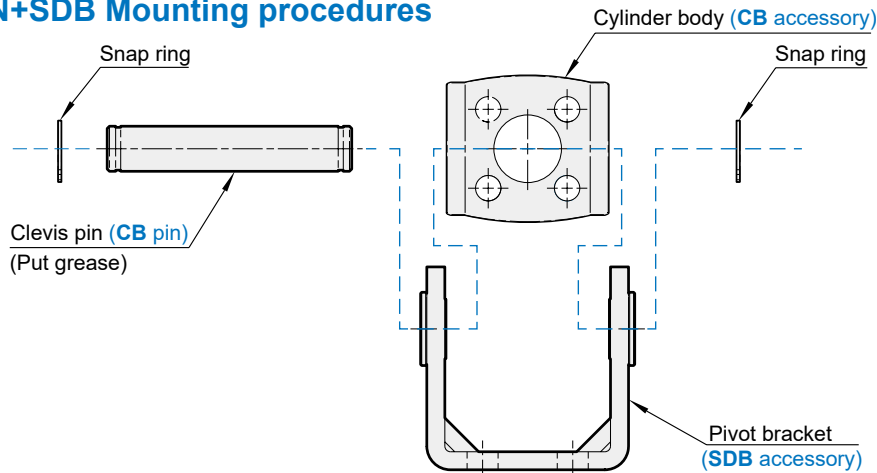
( ): Dimension for long stroke.

**MCCG / MCCN**

**SDB-R(H) / TA / TB Mounting procedures**



**CB+PIN+SDB Mounting procedures**



## ROUND CYLINDER

### Weight – Cylinder

Unit: kg

Model	Stroke	Basic weight		Basic weight (magnet)		Stroke 1"
		MCCN-11	MCCN-11-A	MCCN-11-M	MCCN-11-M-A	
Tube I.D.						
20	~200	0.107	0.112	0.108	0.113	0.022
	201~350	0.117	0.122	0.118	0.123	
25	~300	0.165	0.165	0.166	0.166	0.03
	301~400	0.178	0.178	0.179	0.179	
32	~300	0.233	0.237	0.234	0.238	0.043
	301~450	0.261	0.265	0.262	0.266	
40	~300	0.402	0.413	0.414	0.425	0.067
	301~800	0.44	0.451	0.452	0.463	
50	~300	0.753	0.782	0.77	0.799	0.1
	301~1200	0.838	0.867	0.855	0.884	
63	~300	1.058	1.076	1.078	1.096	0.119
	301~700	1.192	1.21	1.212	1.23	

### Accessories

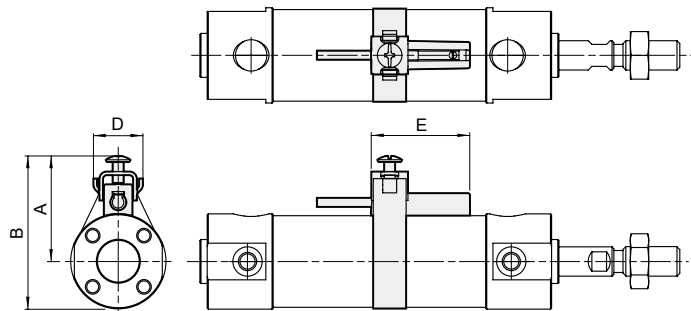
Model	LB	CB	FAC / FBC	SDB	TA / TB	Y	I	PIN-Y-P (With snap ring)	PIN-CB-P (With snap ring)	Rod nut
Tube I.D.										
20	0.0434	0.037	0.066	0.089	0.012	0.0352	0.0318	0.0088	0.0174	0.002
25	0.0543	0.051	0.092	0.111	0.018	0.0622	0.0598	0.0164	0.03	0.004
32	0.072	0.096	0.136	0.202	0.038				0.053	0.01
40	0.089	0.147	0.208	0.311	0.068	0.093	0.07	0.0262	0.086	
50	0.24	0.272	0.364	0.545	0.114	0.182	0.151	0.0618	0.135	0.013
63	0.352	0.488	0.521	0.725	0.176				0.2116	

### Installation of sensor switch

#### Sensor switch: R\*C (Band: BKC-1)

Unit: inch

Code Tube I.D.	A	B	D	E
20	1.11	1.62	0.53	1.06
25	1.21	1.82	0.53	1.06
32	1.37	2.12	0.53	1.06
40	1.55	2.47	0.53	1.06
50	1.76	2.90	0.53	1.06
63	2.04	3.45	0.53	1.06



#### Sensor switch: RCM (Band: BMG\*\*)

Unit: inch

Code Tube I.D.	A	B	C	D	E
20	0.94	1.48	0.28	0.63	1.1
25	1.04	1.67	0.28	0.63	1.1
32	1.20	1.99	0.28	0.63	1.1
40	1.38	2.34	0.28	0.63	1.1
50	1.59	2.78	0.28	0.63	1.1
63	1.87	3.33	0.28	0.63	1.1

