



Special spec



Technical data



Caution for safety
(Read before installing)



Features

■ Non lubrication

Special housing and bushing enables self lubrication of piston rod.

■ High quality long service life

Hard anodised aluminium cylinder tubes offer a high resistance to corrosion and low internal friction.

■ Full range of NFPA interchangeable mounting configurations



Mounting dimensions are in accordance with ANSI (NFPA) T3.6.7 R2-1996, fluid power systems and products-square head industrial cylinders-mounting dimensions.

Table for standard stroke

Tube I.D	Stroke (inch)	Max. stroke (inch)
40: 1 1/2"	1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20	60
50: 2"	1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 24	60
63: 2 1/2"	1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 24	60
80: 3 1/4"	1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 24	60
100: 4"	1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 24	60

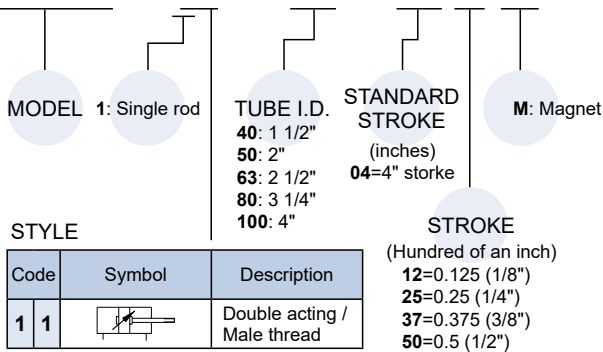
* Intermediate stroke are available, please contact us.

Specification

Model	MCQN				
Tube I.D. (inch)	1 1/2"	2"	2 1/2"	3 1/4"	4"
Port size	NPT3/8			NPT1/2	
Medium	Air				
Operating pressure range	0.05~1 MPa				
Proof pressure	1.5 MPa				
Ambient temperature	-5~+60°C (No freezing)				
Available speed range	50~500 mm/sec				
Sensor switch	RDC(V), RQC(V)  , RCA 				
Sensor switch holder	R*C(V)	DT7-1			DT7-2
	RCA	HV1	HV2	HV2	HV3 HV3

Order example

MCQN – 11 – 40 – 0425M



Accessories & Connector

Accessories Δ TC accessories are factory-installed, not available for separate purchase or field assembly

Code	LB (LBx2)	CA	CB	CB2	FAC	FBC	TC Δ
Mounting Tube I.D.							
$\phi 40$	LB-Q5-40x2	CA-Q5-40	CB-Q5-40	CB2-Q5-40	FAC-Q5-40	FBC-Q5-40	TC-Q5-40
$\phi 50$	LB-Q5-50x2	CA-Q5-50	CB-Q5-50	CB2-Q5-50	FAC-Q5-50	FBC-Q5-50	TC-Q5-50
$\phi 63$	LB-Q5-63x2	CA-Q5-63	CB-Q5-63	CB2-Q5-63	FAC-Q5-63	FBC-Q5-63	TC-Q5-63
$\phi 80$	LB-Q5-80x2	CA-Q5-80	CB-Q5-80	CB2-Q5-80	FAC-Q5-80	FBC-Q5-80	TC-Q5-80
$\phi 100$	LB-Q5-100x2	CA-Q5-100	CB-Q5-100	CB2-Q5-100	FAC-Q5-100	FBC-Q5-100	TC-Q5-100

Pin

Connector		Applicable CA/ CB/ CB2/ Y/ I	
Code	Y	I	PIN (with split pin)
Mounting Tube I.D.			
$\phi 40$	Y-Q5-40	I-Q5-40	Fig
$\phi 50$			PIN-Q5-40-1-P
$\phi 63$			PIN-Q5-40-1-P
$\phi 80$	Y-Q5-80	I-Q5-80	PIN-Q5-80-1-P
$\phi 100$			PIN-Q5-80-1-P

Order example of self-assembled

The tube I.D. $\phi 63$ of LB accessories, Y connector and pin.

No.	Order number	Qty
1	LB-Q5-63x2	1
2	Y-Q5-40	1
3	PIN-Q5-40-1-P	1

* To order accessories/ connectors/ pin separately, please place orders separately according to the order codes in the above table.

Order example of factory assembled

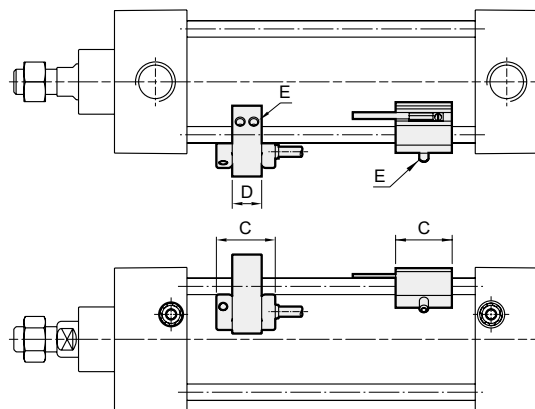
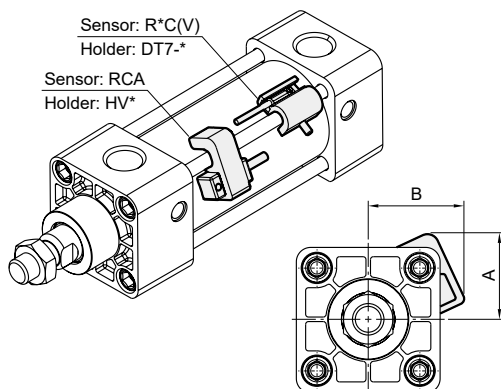
Δ Cylinders and accessories are distinguished by the symbol " + ".

MCQN – Standard model no. + TC

CYLINDER

ACCESSORIES

Installation of sensor switch



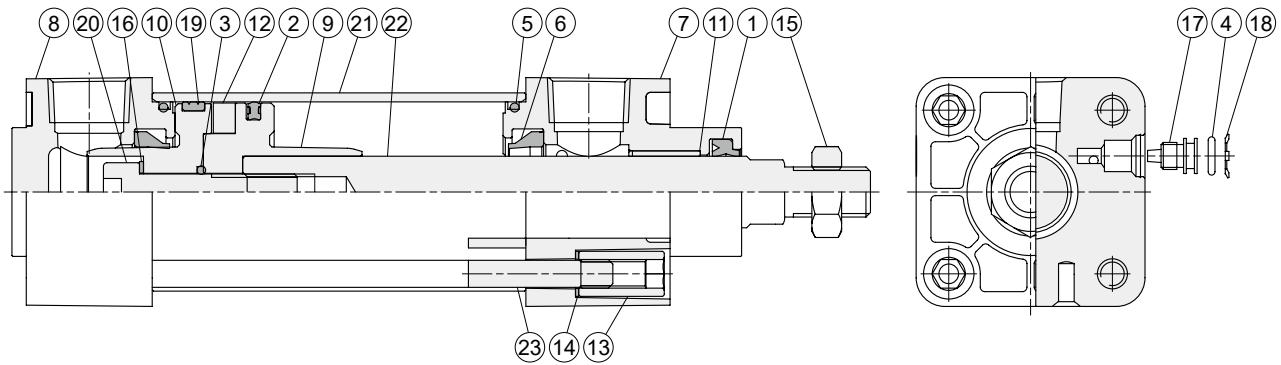
Unit: inch

Code Tube I.D.	Sensor switch	Holder	A	B	C	D	E
40	RCA	HV1	1.10	1.47	1.02	0.51	M4x10L
50	RCA	HV2	1.49	1.68	1.02	0.51	M4x10L
63	RCA	HV2	1.66	1.86	1.02	0.51	M4x10L
80	RCA	HV3	1.87	2.13	1.02	0.51	M4x10L
100	RCA	HV3	2.15	2.42	1.02	0.51	M4x10L

Code Tube I.D.	Sensor switch	Holder	A	B	C	E
40	R*C(V)	DT7-1	1.04	1.08	0.98	M4x12L
50	R*C(V)	DT7-1	1.24	1.26	0.98	M4x12L
63	R*C(V)	DT7-1	1.42	1.44	0.98	M4x12L
80	R*C(V)	DT7-2	1.75	1.79	0.98	M4x12L
100	R*C(V)	DT7-2	2	2.07	0.98	M4x12L

MCQN-11 Inside structure & Part list

STANDARD CYLINDER



No.	Part name	Material	Q'y		Component parts (inclusion)	Repair kits (inclusion)	Note
			ø40~ø63	ø80, ø100			
1	Rod packing	NBR	1		●	●	
2	Piston packing	NBR	1		●	●	
3	O-ring	NBR	1		●	●	
4	O-ring	NBR	2		●	●	
5	O-ring	NBR	2		●	●	
6	Cushion packing	NBR	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		◎		◎ Optional
13	Tie rod nut	Carbon steel	8		●		
14	Washer	Carbon steel	8	-	●		
15	Rod nut	Carbon steel	1		●		
16	Washer	Carbon steel	1		●		
17	Needle valve	Copper alloy	2		●		
18	Needle valve washer	Spring steel	2		●		
19	Wear ring	Resin	1		●		
20	Bolt	Carbon steel	1		●		
21	Cylinder tube	Aluminum alloy	1				
22	Piston rod	Carbon steel	1				
23	Tie rod	Carbon steel	4				

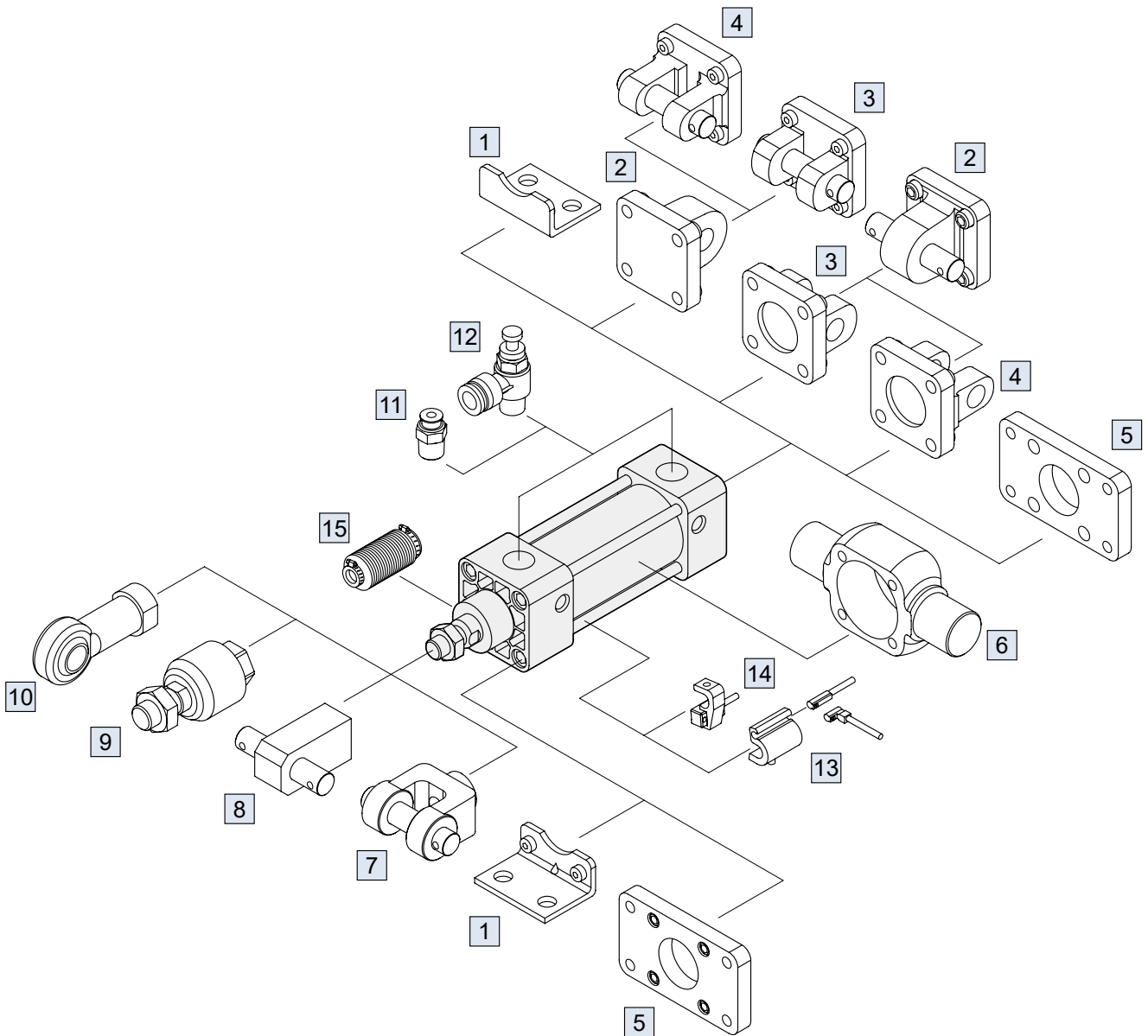
Order example of Repair kits

Tube I.D.	Repair kits
ø40	PS-MCQN-40
ø50	PS-MCQN-50
ø63	PS-MCQN-63
ø80	PS-MCQN-80
ø100	PS-MCQN-100

Component parts

Tube I.D.	Component parts
ø40	CP-MCQN-40(M)
ø50	CP-MCQN-50(M)
ø63	CP-MCQN-63(M)
ø80	CP-MCQN-80(M)
ø100	CP-MCQN-100(M)

M: With magnet



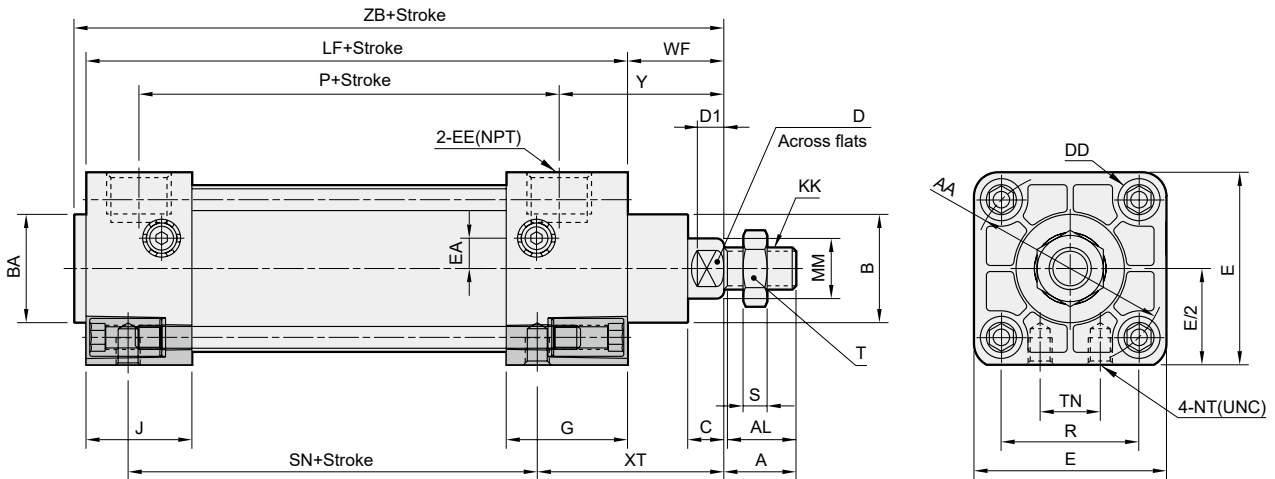
No.	Accessories	Material	Page link
1	Mounting accessories LB	Carbon steel	↗
2	Mounting accessories CA+PIN	Cast iron / *	↗ , ↘
3	Mounting accessories CB+PIN	Cast iron / *	↗ , ↘
4	Mounting accessories CB2+PIN	Cast iron / *	↗ , ↘
5	Mounting accessories FAC/FBC	Carbon steel	↗
6	Mounting accessories TC	Cast iron	↗
7	Accessories Y+PIN	Cast iron / *	↗
8	Accessories I+PIN	Carbon steel	↗

No.	Accessories	Material	Page link
9	Floating joint MFC	Carbon steel	↗
10	Female rod ends PHS	Carbon steel	↗
11	Fitting PC (PISCO)	—	↗
12	Speed controller JSC (PISCO)	—	↗
13	Sensor switch R*C(V)+DT7-*	—	↗
14	Sensor switch RCA+HV*	—	↗
15	Protective bellows kit	NBR	—

* PIN material is carbon steel.

STANDARD CYLINDER

11



Unit: inch

Code Tube I.D.	A	AA	AL	B	BA	C	D	D1	DD	E	EA	EE	G	J	KK	LF	MM	NT	P	R
40	0.75	2.02	0.673	1.125	1.125	0.375	0.56	0.3	1/4-28	2	0.32	3/8	1.26	1.10	7/16-20	3.625	0.625	1/4-20×0.28 dp	2.36	1.43
50	0.75	2.60	0.673	1.125	1.125	0.375	0.56	0.3	5/16-24	2.5	0.43	3/8	1.26	1.06	7/16-20	3.625	0.625	5/16-18×0.44 dp	2.40	1.84
63	0.75	3.10	0.673	1.125	1.125	0.375	0.56	0.3	5/16-24	3	0.47	3/8	1.30	1.06	7/16-20	3.75	0.625	3/8-16×0.59 dp	2.48	2.19
80	1.125	3.90	1.045	1.5	1.5	0.5	0.88	0.4	3/8-24	3.75	—	1/2	1.57	1.18	3/4-16	4.25	1	1/2-13×0.63 dp	2.72	2.76
100	1.125	4.70	1.045	1.5	1.5	0.5	0.88	0.4	3/8-24	4.5	—	1/2	1.57	1.18	3/4-16	4.25	1	1/2-13×0.63 dp	2.72	3.32

Code Tube I.D.	S	SN	T	TN	WF	XT	Y	ZB
40	0.26	2.25	0.69	0.63	1	1.94	1.71	4.75
50	0.26	2.25	0.69	0.88	1	1.94	1.71	4.75
63	0.26	2.38	0.69	1.25	1	1.94	1.75	4.88
80	0.42	2.63	1.12	1.50	1.38	2.44	2.34	5.83
100	0.42	2.63	1.12	2.06	1.38	2.44	2.34	5.83

STANDARD CYLINDER

Cylinder weight

Unit: kg

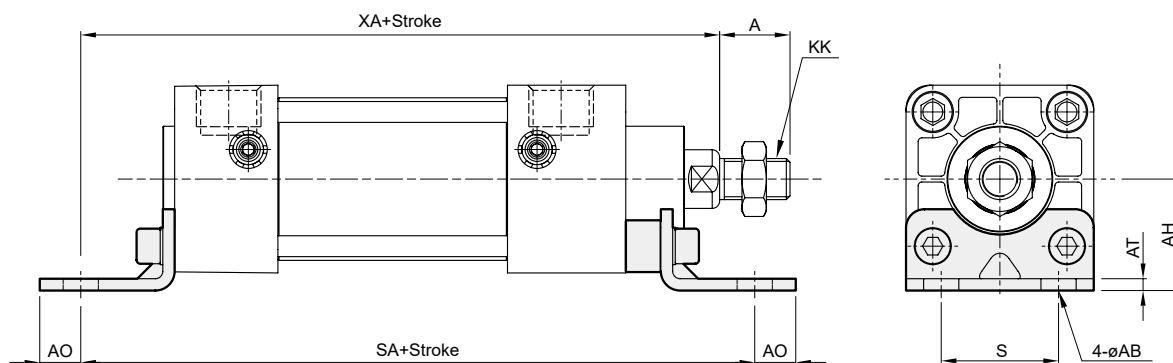
Model	Basic weight MCQN-11	Basic weight (magnet) MCQN-11	Stroke 1 inch MCQN-11
Tube I.D.			
40	0.664	0.676	0.078
50	0.965	0.981	0.096
63	1.314	1.334	0.108
80	2.482	2.510	0.200
100	3.266	3.300	0.220

Accessories weight

Unit: kg

Model	LB	CA	CB	CB2	FAC/FBC	TC	Y	I	PIN
Tube I.D.									
40	0.160	0.285	0.229	0.287	0.246	0.554	0.205	0.150	0.065
50	0.240	0.394	0.377	0.424	0.403	0.644	0.205	0.150	0.065
63	0.300	0.531	0.521	0.563	0.576	0.840	0.205	0.150	0.065
80	0.633	1.511	1.302	1.482	1.408	1.098	0.662	0.522	0.175
100	0.955	2.047	1.821	2.033	2.015	1.450	0.662	0.522	0.175

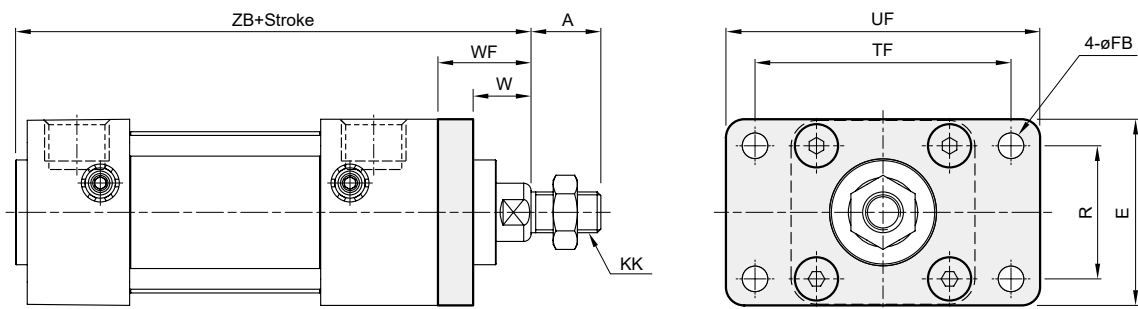
LB



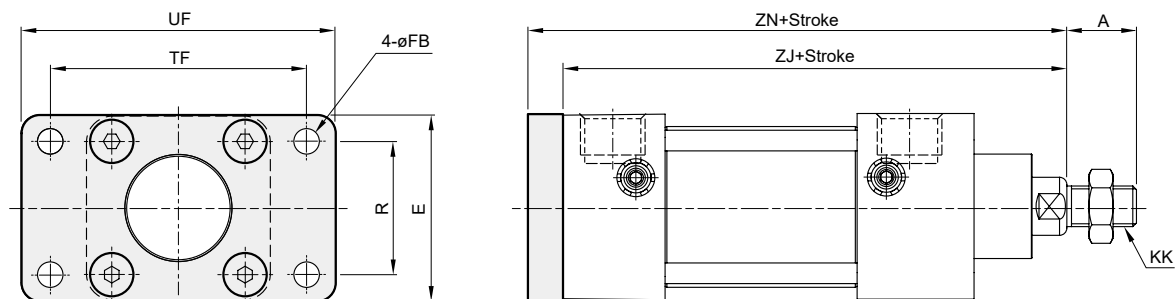
Unit: inch

Code Tube I.D.	A	AB	AH	AT	AO	KK	S	SA	XA
40	0.75	0.38	1.19	0.13	0.44	7/16-20	1.25	6	5.63
50	0.75	0.38	1.44	0.13	0.56	7/16-20	1.75	6	5.63
63	0.75	0.38	1.63	0.13	0.56	7/16-20	2.25	6.13	5.75
80	1.125	0.5	1.94	0.17	0.75	3/4-16	2.75	7.38	6.88
100	1.125	0.5	2.25	0.23	0.75	3/4-16	3.5	7.38	6.88

FAC



FBC

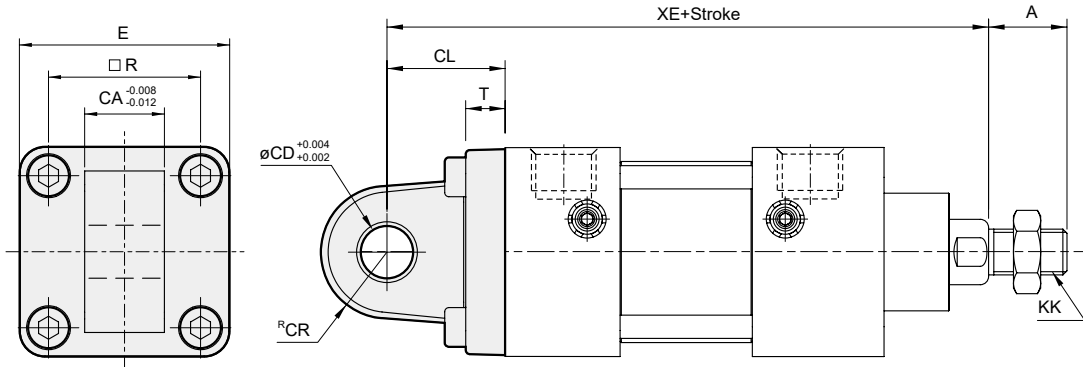


Unit: inch

Code Tube I.D.	A	E	FB	KK	R	TF	UF	W	WF	ZB	ZJ	ZN
40	0.75	2	0.25	7/16-20	1.43	2.75	3.38	0.63	1	4.75	4.63	5
50	0.75	2.5	0.31	7/16-20	1.84	3.38	4.13	0.63	1	4.75	4.63	5
63	0.75	3	0.31	7/16-20	2.19	3.88	4.63	0.63	1	4.88	4.75	5.13
80	1.125	3.75	0.38	3/4-16	2.76	4.68	5.50	0.75	1.38	5.83	5.63	6.25
100	1.125	4.5	0.38	3/4-16	3.32	5.44	6.25	0.75	1.38	5.83	5.63	6.25

STANDARD CYLINDER

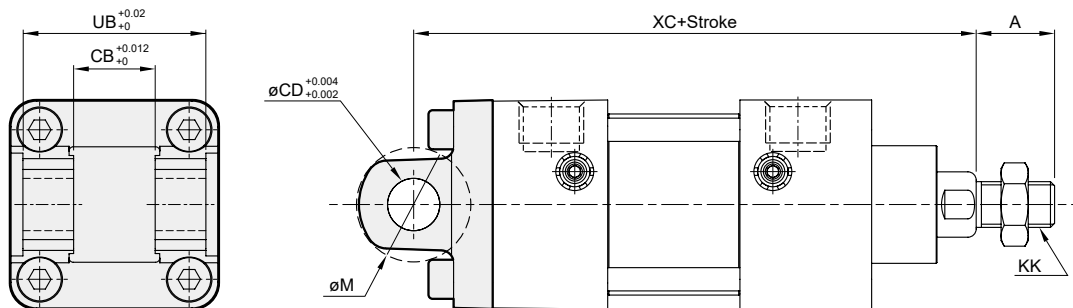
CA



Unit: inch

Code Tube I.D.	A	CA	CD	CL	CR	E	KK	R	T	XE
40	0.75	0.75	0.5	1.125	0.63	2	7/16-20	1.43	0.375	5.75
50	0.75	0.75	0.5	1.125	0.63	2.5	7/16-20	1.84	0.375	5.75
63	0.75	0.75	0.5	1.125	0.63	3	7/16-20	2.19	0.375	5.88
80	1.125	1.25	0.75	1.875	0.87	3.75	3/4-16	2.76	0.625	7.5
100	1.125	1.25	0.75	1.875	0.87	4.5	3/4-16	3.32	0.625	7.5

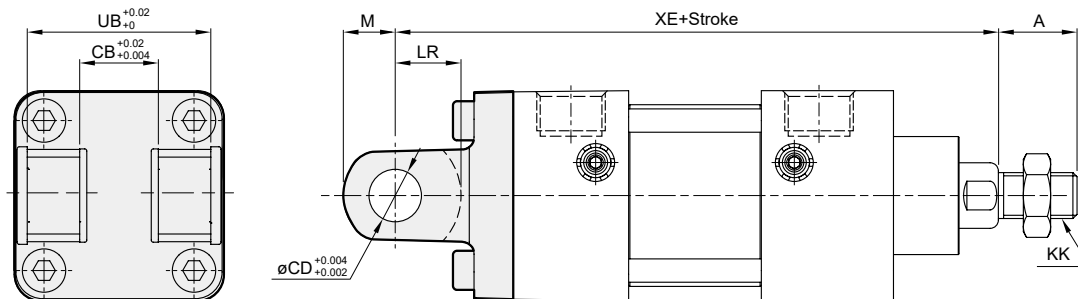
CB



Unit: inch

Code Tube I.D.	A	CB	CD	KK	M	UB	XC
40	0.75	0.78	0.5	7/16-20	1.24	1.75	5.38
50	0.75	0.78	0.5	7/16-20	1.24	1.75	5.38
63	0.75	0.78	0.5	7/16-20	1.24	1.75	5.5
80	1.125	1.28	0.75	3/4-16	1.88	2.5	6.88
100	1.125	1.28	0.75	3/4-16	1.88	2.5	6.88

CB2

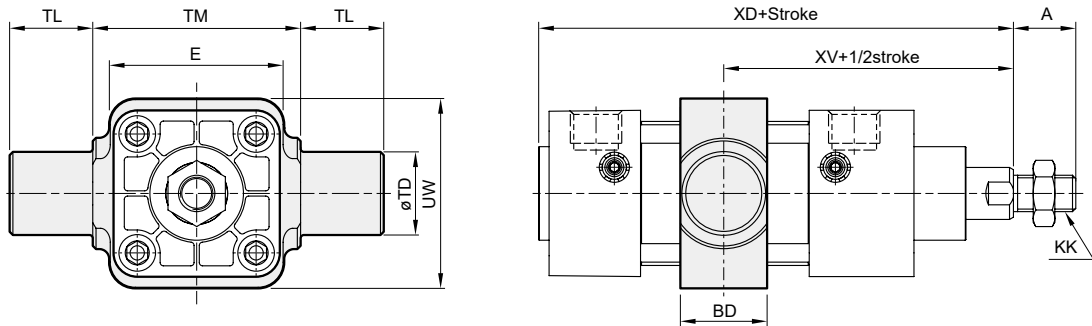


Unit: inch

Code Tube I.D.	A	CB	CD	KK	LR	M	UB	XE
40	0.75	0.75	0.5	7/16-20	0.63	0.5	1.75	5.75
50	0.75	0.75	0.5	7/16-20	0.63	0.5	1.75	5.75
63	0.75	0.75	0.5	7/16-20	0.63	0.5	1.75	5.88
80	1.125	1.25	0.75	3/4-16	1	0.75	2.5	7.5
100	1.125	1.25	0.75	3/4-16	1	0.75	2.5	7.5

STANDARD CYLINDER

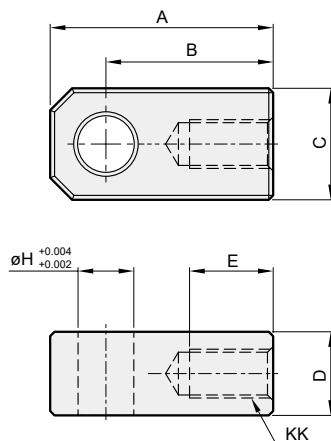
TC



Unit: inch

Code Tube I.D.	A	BD	E	KK	TD	TM	TL	UW	XD	XV
40	0.75	1.04	2.11	7/16-20	1	2.5	1	2.28	4.94	3.2
50	0.75	1.04	2.6	7/16-20	1	3	1	2.60	5.03	3.32
63	0.75	1.1	3.09	7/16-20	1	3.5	1	3.23	5.07	3.33
80	1.125	1.18	3.7	3/4-16	1	4.5	1	4.17	6.16	4.19
100	1.125	1.22	4.49	3/4-16	1	5.25	1	4.96	6.18	4.19

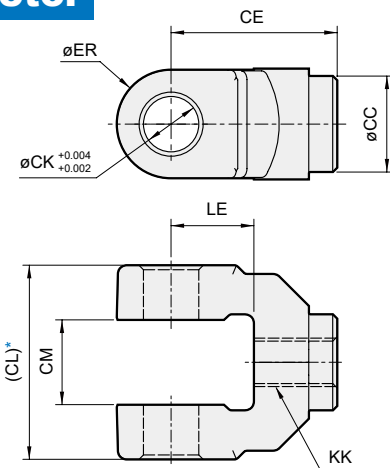
I connector



Unit: inch

Code Tube I.D.	A	B	C	D	E	H	KK
40~63	2	1.5	1	0.75	0.75	0.5	7/16-20
80~100	2.81	2.06	1.5	1.25	1.13	0.75	3/4-16

Y connector



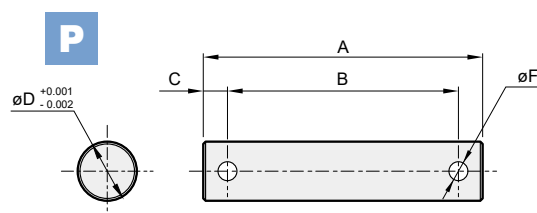
* Please do not take the sand casting plate as the mounting plate, because we do not machine it. If you have this special demand, please contact our sales representative.

Unit: inch

Code Tube I.D.	CC	CE	CL	CM	CK	ER	KK	LE
40~63	0.87	1.5	1.75	0.765	0.5	1	7/16-20	0.75
80~100	1.34	2.38	2.5	1.265	0.75	1.5	3/4-16	1.25

PIN

for CB & CB2 accessory and Y & I connector.



Unit: inch

Code Tube I.D.	A	B	C	D	F
40~63	2.36	1.95	0.2	0.5	0.16
80~100	3.13	2.74	0.19	0.75	0.2