

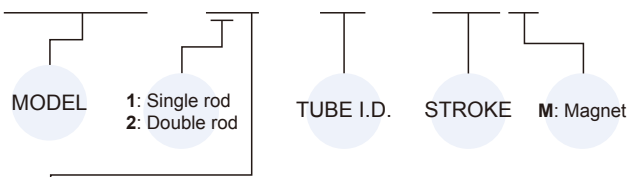
### Table for standard stroke

Tube I.D.	Stroke (mm)
ø32,40	50,75,100,125,150,175,200,250,300,350,400,450,500
ø50,63	↑ 600
ø80,100	↑ 600,700

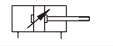


- Stroke out of specification is also available.
- Please consult us if stroke out of specification.

### Order example

MCQI2 – 11 – 50 – 100M



#### STYLE

Code	Symbol	Description
1 1		Double acting / Male thread
2 1		Double rod / Double acting / Male thread
2 7		Double rod / Adjustable male thread (Please mark "adjustable distance(mm)" at order list)

- \* Order example for special specification, refer to page 0-7.
- \* Order example for Rc or NPT thread please consult us.

### 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.
- **ISO-VDMA standard specification**  
Conforms to ISO-6431 and VDMA 24562 specification enabling worldwide interchangeability.
- **Easy to insert reed switch**  
With four grooves on the tube, proximity and reed sensors can be easily inserted into any position.

### Specification

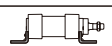
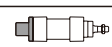
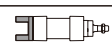
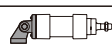
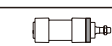
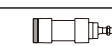
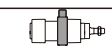

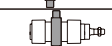
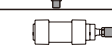
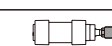

Model	MCQI2
Tube I.D. (mm)	32,40,50,63,80,100
Medium	Air
Operating pressure range	0.05~1 MPa
Proof pressure	1.5 MPa
Ambient temperature	-5~+60°C (No freezing)
Available speed range	50~500 mm/sec
Sensor switch (*)	RCI

\* RCI specification, please refer to page 8-11.

### Mounting accessories

\* Use the same accessories with MCQV2 and MCQI2.

FAC – MCQV – 50

MOUNTING TYPE	MODEL	TUBE I.D.
	LB	MCQV
	CA	
	CB	
	CDB (+CB+PIN)*	
	FAC	
	FBC	MCQI2
	TA	
	TB	
	TC	
	Y	MCQV
	I	
	YS (Y+Floating+PIN)	

\* CB+PIN have to extra purchase.

\* Mounting accessories please refer to page 1-61.

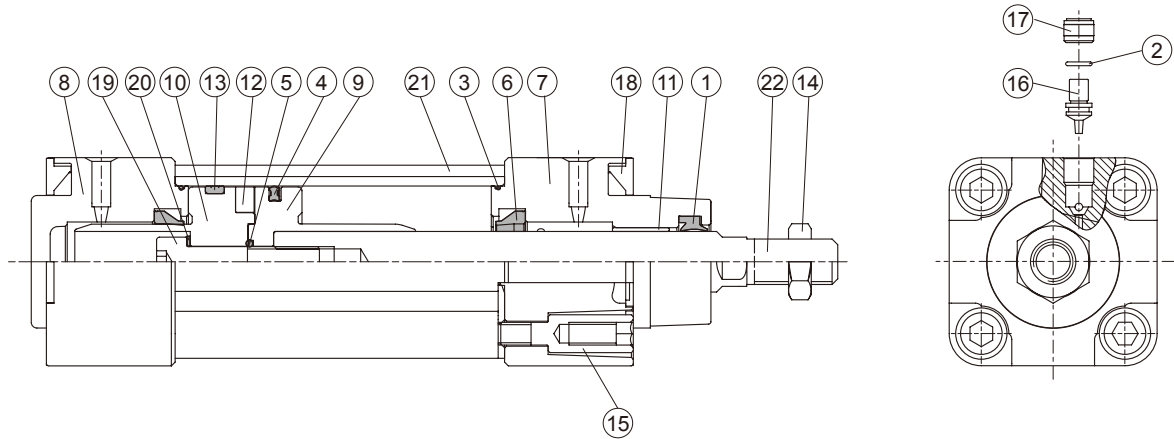
# MCQI2-11 Inside structure & Parts list

ISO-VDMA **STANDARD PROFILE CYLINDER**



## Single rod 11 type

ø32~ø100



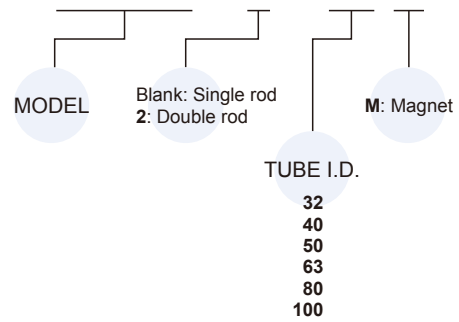
### Material

No.	Part name	Material	Q'y	Component parts (inclusion)	Repair kits (inclusion)
1	Rod packing	NBR	1	●	●
2	O-ring	NBR	2	●	
3	O-ring	NBR	2	●	●
4	Piston packing	NBR	1	●	●
5	O-ring	NBR	1	●	●
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	◎	
13	Wear ring	Teflon	1	●	
14	Nut	Carbon steel	1	●	
15	Screw	Carbon steel	8	●	
16	Needle valve	Copper alloy	2	●	
17	Insert nut	Copper alloy	2	●	
18	Cover plate	Plastic	2	●	
19	Bolt	Carbon steel	1	●	
20	Washer	Carbon steel	1	●	
21	Cylinder tube	Aluminum alloy	1		
22	Piston rod	Carbon steel	1		

\* ◎ Option

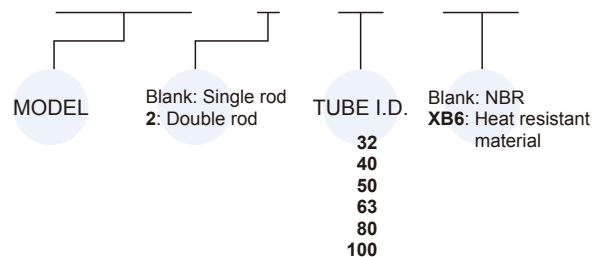
### Order example of component parts

CP — MCQI2 — 2 — 40 M



### Order example of repair kits

PS — MCQI2 — 2 — 40 — XB6



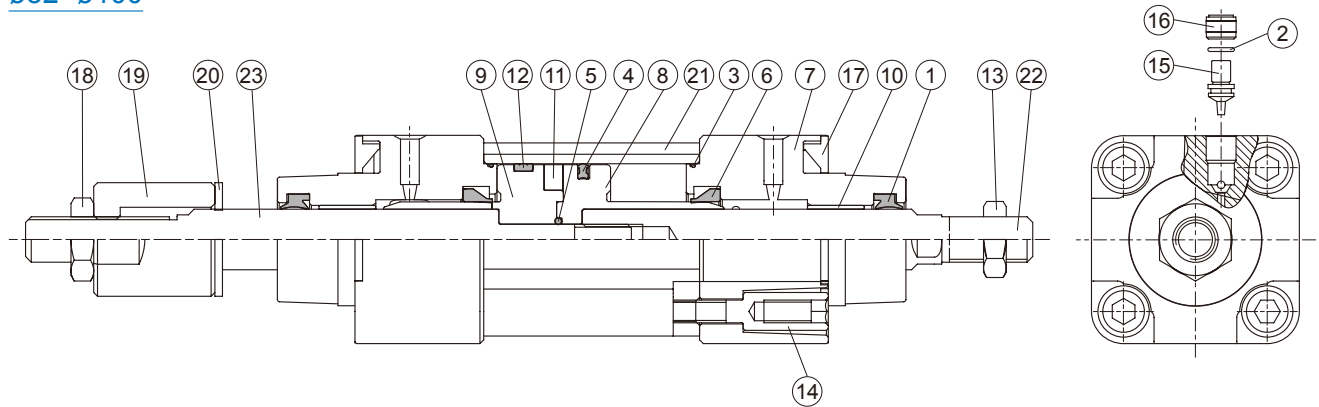
# MCQI2-2\* Inside structure & Parts list

ISO-VDMA **STANDARD PROFILE CYLINDER**



## Double rod 21 / 27 type

ø32~ø100



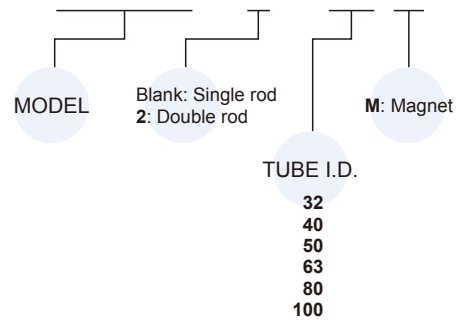
### Material

No.	21 type	27 type	Part name	Material	Q'y	Component parts (inclusion)	Repair kits (inclusion)
1	●	●	Rod packing	NBR	2	●	●
2	●	●	O-ring	NBR	2	●	
3	●	●	O-ring	NBR	2	●	●
4	●	●	Piston packing	NBR	1	●	●
5	●	●	O-ring	NBR	1	●	●
6	●	●	Cushion packing	NBR	2	●	●
7	●	●	Rod cover	Aluminum alloy	2	●	
8	●	●	Piston-R	Aluminum alloy	1	●	
9	●	●	Piston-h	Aluminum alloy	1	●	
10	●	●	Bush	Bearing alloy	2	●	
11	●	●	Magnet ring	Magnet material	1	◎	
12	●	●	Wear ring	Teflon	1	●	
13	●	●	Nut	Carbon steel	1	●	
14	●	●	Screw	Carbon steel	8	●	
15	●	●	Needle valve	Copper alloy	2	●	
16	●	●	Insert nut	Copper alloy	2	●	
17	●	●	Cover plate	Plastic	2	●	
18		●	Nut	Carbon steel	1		
19		●	Adjustable nut	Carbon steel	1		
20		●	Gasket	PU	1		
21	●	●	Cylinder tube	Aluminum alloy	1		
22	●	●	Piston rod #1	Carbon steel	1		
23	●	●	Piston rod #2	Carbon steel	1		

\* ◎ Option

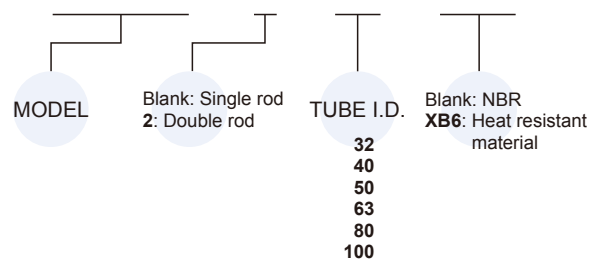
### Order example of component parts

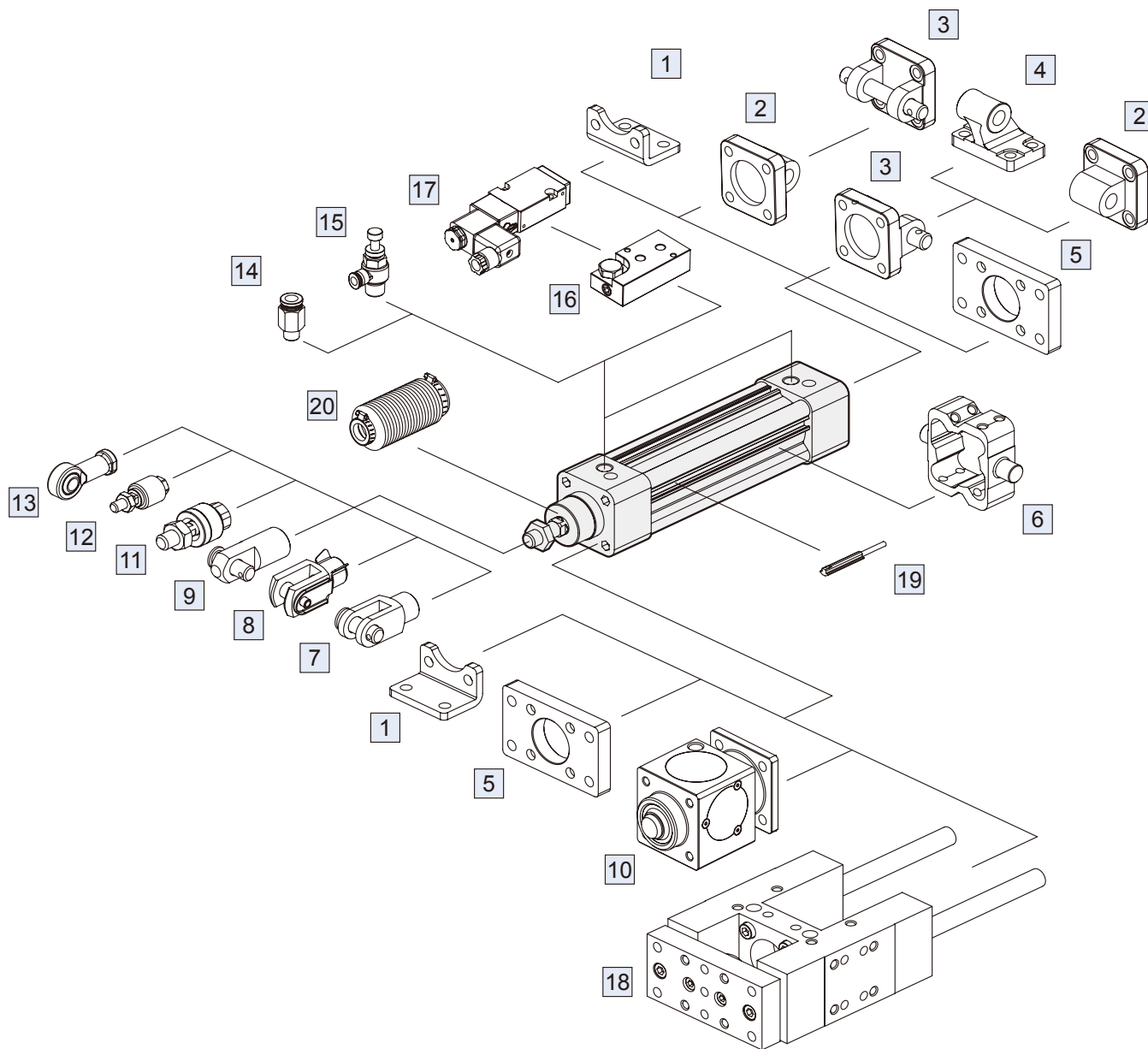
CP — MCQI2 — 2 — 40 M



### Order example of repair kits

PS — MCQI2 — 2 — 40 — XB6





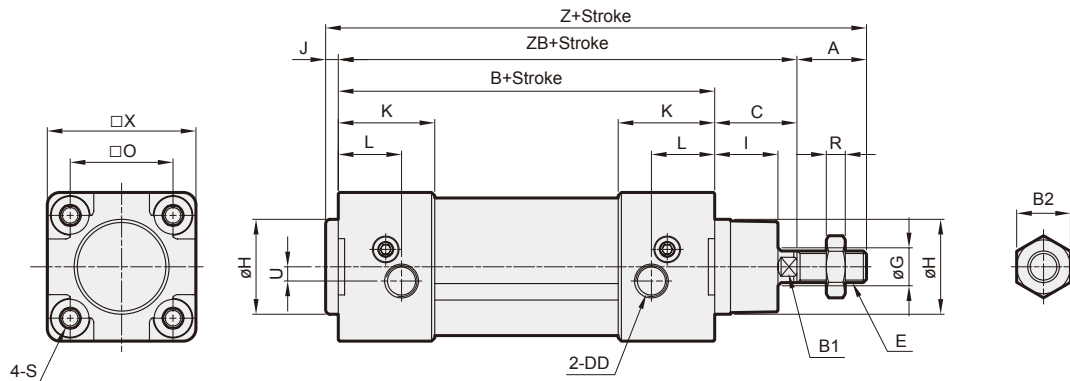
No.	Accessories	Material	Page
1	Mounting accessories LB	Carbon steel	1-36, 42
2	Mounting accessories CA	Cast iron	1-38, 43
3	Mounting accessories CB+PIN	Cast iron / *1	1-38, 43, 46, 47
4	Mounting accessories CDB	Cast iron	1-39
5	Mounting accessories FAC/FBC	Carbon steel	1-37, 42
6	Mounting accessories TA/TB/TC	Cast iron	1-39, 40, 44, 45
7	Accessories Y+PIN	Cast iron / *1	1-46, 47
8	Accessories YS (Y+Floating pin)	Carbon steel	1-46
9	Accessories I+PIN	Carbon steel	1-46, 47
10	Locking unit MCBQI2	Aluminum alloy+*2	1-65

No.	Accessories	Material	Page
11	Floating joint MFC	Carbon steel	8-2
12	Floating joint MFCS	Carbon steel	8-4
13	Female rod ends PHS	Carbon steel	8-5
14	Fitting PC (PISCO)	—	8-5 (Vol.1)
15	Speed controller JSC (PISCO)	—	8-18 (Vol.1)
16	Cylinder link seats MVSN-300-C	Aluminum alloy	1-66 (Vol.1)
17	Solenoid valve MVSN-220 / 300	—	1-62, 64 (Vol.1)
18	Sensor switch RCA+HV*	—	8-6
19	Twin-guide cylinders MGTB/TU/TX	—	4-38
20	Protective bellows kit	NBR	—

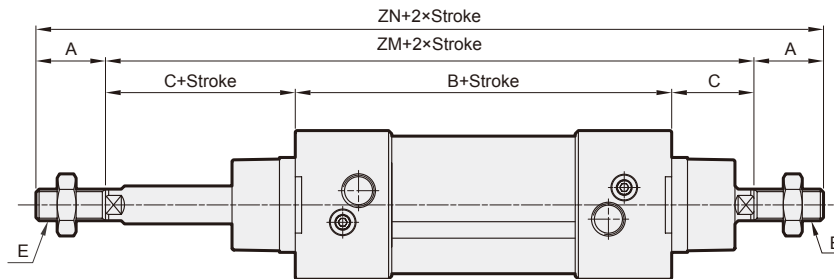
\*1. PIN material is carbon steel.

\*2. Bronze alloy.

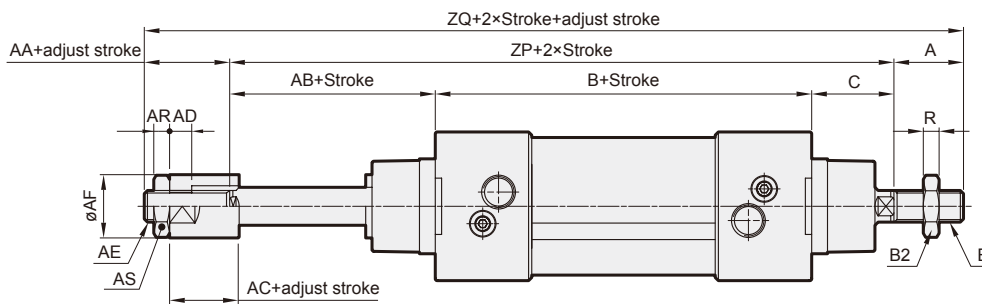
11



21

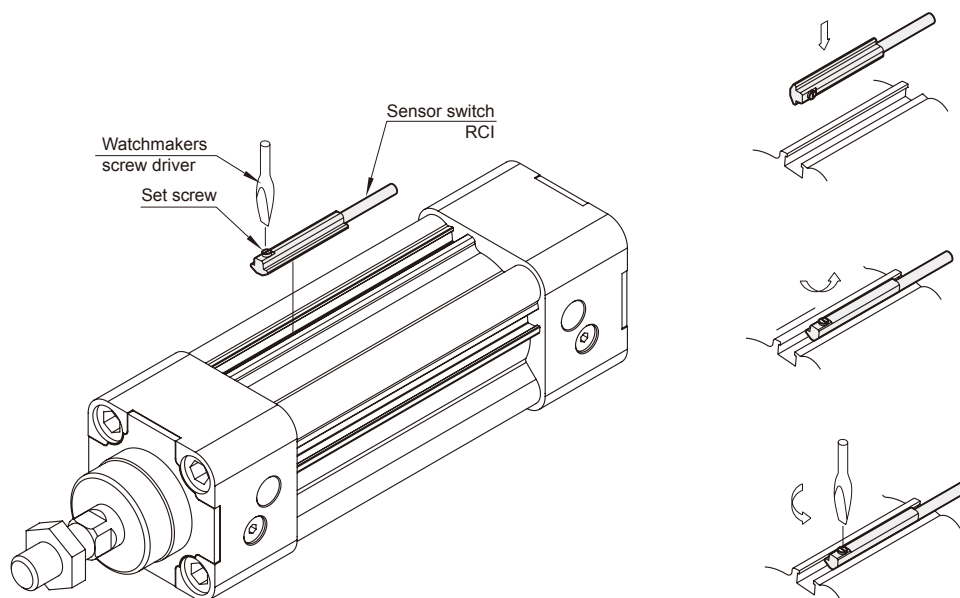


27



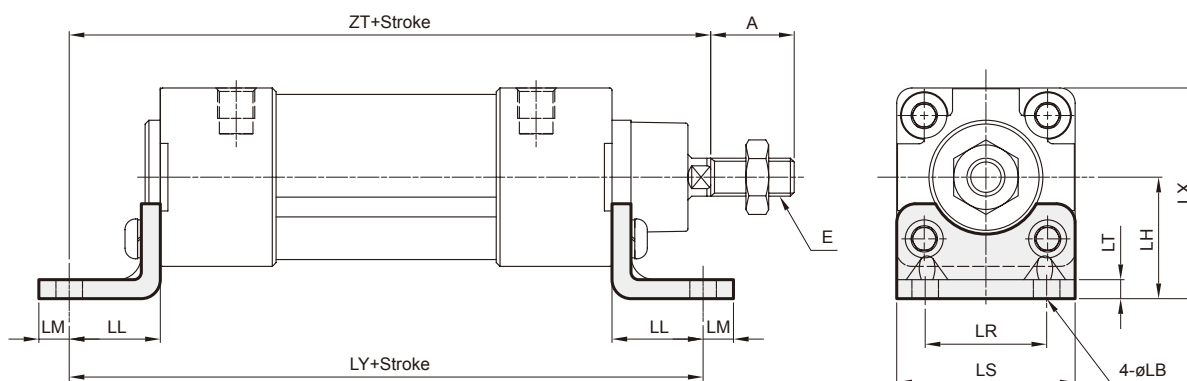
Code Tube I.D.	A	AA	AB	AC	AD	AE	AF	AR	AS	B	B1	B2	C	DD	E	G	H	I	J	K	L	O
32	22	16	26	12	7	M10×1.25	20	5	17	94	10	17	26	G1/8	M10×1.25	12	30	20	4	30.5	20	32.5
40	24	20	27	12	7	M12×1.25	30	6	19	105	13	19	30	G1/4	M12×1.25	16	35	20.5	4	34	14.5	38
50	32	18	34	15	10	M16×1.5	40	8	24	106	16	24	37	G1/4	M16×1.5	20	40	28	4	31	16	46.5
63	32	20	32	15	10	M16×1.5	40	8	24	121	16	24	37	G3/8	M16×1.5	20	45	26	4	33	16	56.5
80	40	32	41	20	14	M22×1.5	50	13	32	128	21	30	46	G3/8	M20×1.5	25	45	32.5	4	35.5	20.5	72
100	40	30	46	20	14	M22×1.5	50	13	32	138	21	30	51	G1/2	M20×1.5	25	55	37.5	4	37	19	89

Code Tube I.D.	R	S	U	X	Z	ZB	ZM	ZN	ZP	ZQ
32	5	M6×1.0	4.5	47	146	120	146	190	146	184
40	6	M6×1.0	5.3	55	163	135	165	213	162	206
50	8	M8×1.25	8.5	65	179	143	180	244	177	227
63	8	M8×1.25	8	78	194	158	195	259	190	242
80	10	M10×1.5	9	95	218	174	220	300	215	287
100	10	M10×1.5	13	115	233	189	240	320	235	305



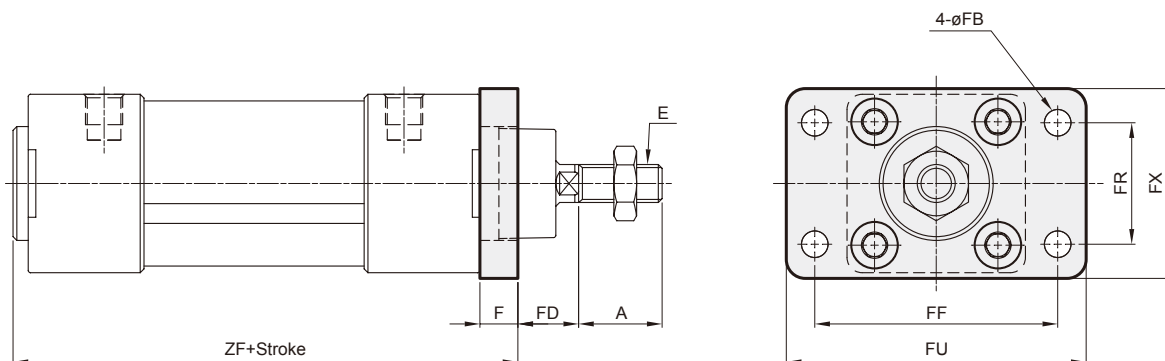
### ■ Mounting accessories

#### LB



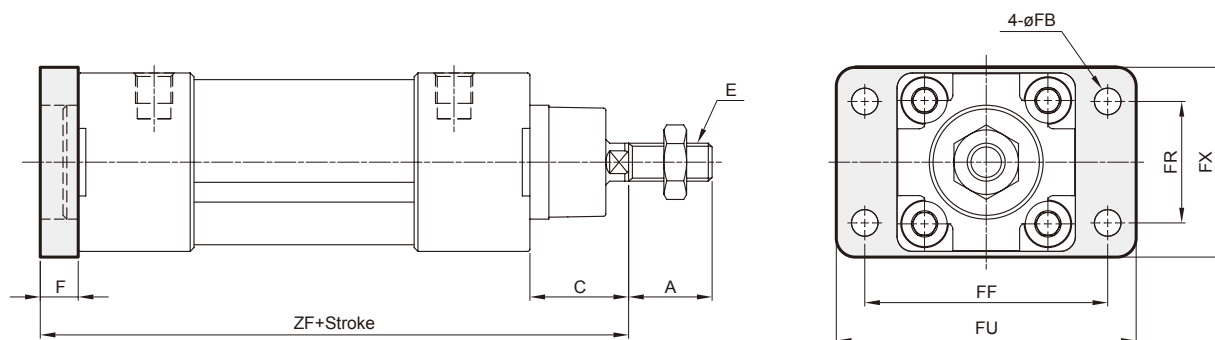
Code Tube I.D.	A	E	LB	LH	LL	LM	LR	LS	LT	LX	LY	ZT
32	22	M10×1.25	7	32	24	8	32	47	5	55.5	142	144
40	24	M12×1.25	9	36	28	10	36	53	5	63.5	161	163
50	32	M16×1.5	9	45	32	10	45	65	5	77.5	170	175
63	32	M16×1.5	9	50	32	10	50	75	5	89	185	190
80	40	M20×1.5	12	63	41	13	63	95	6	110.5	210	215
100	40	M20×1.5	14	71	41	13	75	115	6	128.5	220	230

### FAC



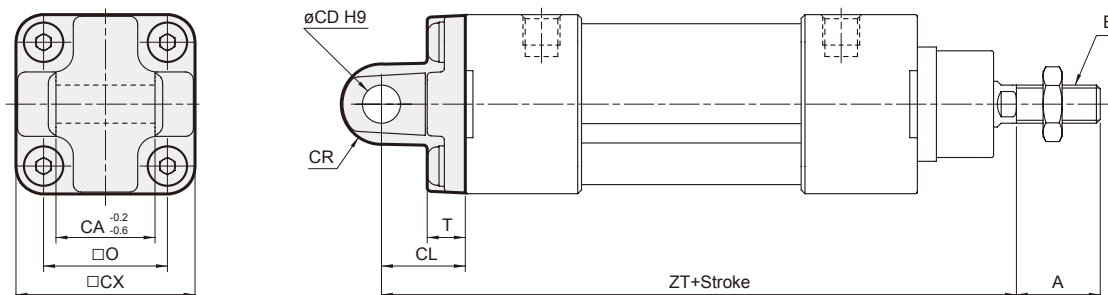
Code Tube I.D.	A	E	F	FB	FD	FF	FR	FU	FX	ZF
32	22	M10×1.25	10	7	16	64	32	79	50	108
40	24	M12×1.25	10	9	20	72	36	90	52	120
50	32	M16×1.5	12	9	25	90	45	110	65	123
63	32	M16×1.5	12	9	25	100	50	125	76	137
80	40	M20×1.5	16	12	30	126	63	154	94	148
100	40	M20×1.5	16	14	35	150	75	180	112	158

### FBC



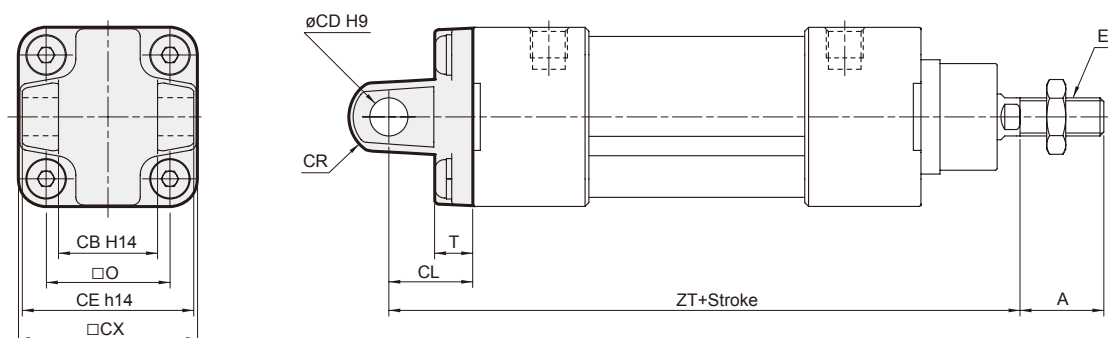
Code Tube I.D.	A	C	E	F	FB	FF	FR	FU	FX	ZF
32	22	26	M10×1.25	10	7	64	32	79	50	130
40	24	30	M12×1.25	10	9	72	36	90	52	145
50	32	37	M16×1.5	12	9	90	45	110	65	155
63	32	37	M16×1.5	12	9	100	50	125	76	170
80	40	46	M20×1.5	16	12	126	63	154	94	190
100	40	51	M20×1.5	16	14	150	75	180	112	205

### CA



Code Tube I.D.	A	CA	CD	CL	CR	CX	E	O	T	ZT
32	22	26	10	22	R10.5	46.5	M10×1.25	32.5	10	142
40	24	28	12	25	R12	54	M12×1.25	38	9	160
50	32	32	12	27	R13	64	M16×1.5	46.5	9	170
63	32	40	16	32	R17	75	M16×1.5	56.5	9	190
80	40	50	16	36	R17	93	M20×1.5	72	12	210
100	40	60	20	41	R21	114	M20×1.5	89	11	230

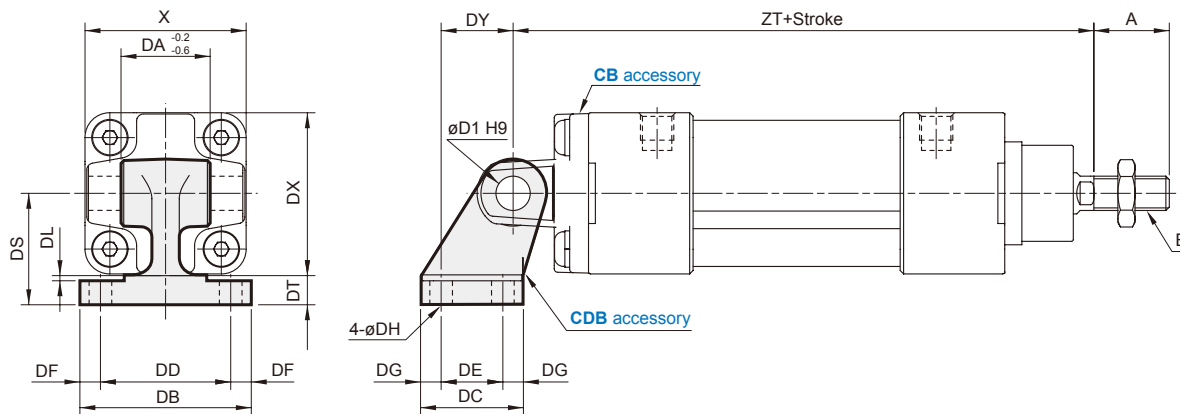
### CB



Code Tube I.D.	A	CB	CD	CE	CL	CR	CX	E	O	T	ZT
32	22	26	10	45	22	R10.5	46.5	M10×1.25	32.5	10	142
40	24	28	12	52	25	R12	54	M12×1.25	38	9	160
50	32	32	12	60	27	R14	64	M16×1.5	46.5	9	170
63	32	40	16	70	32	R17	75	M16×1.5	56.5	9	190
80	40	50	16	90	36	R17	93	M20×1.5	72	12	210
100	40	60	20	110	41	R21	114	M20×1.5	89	11	230

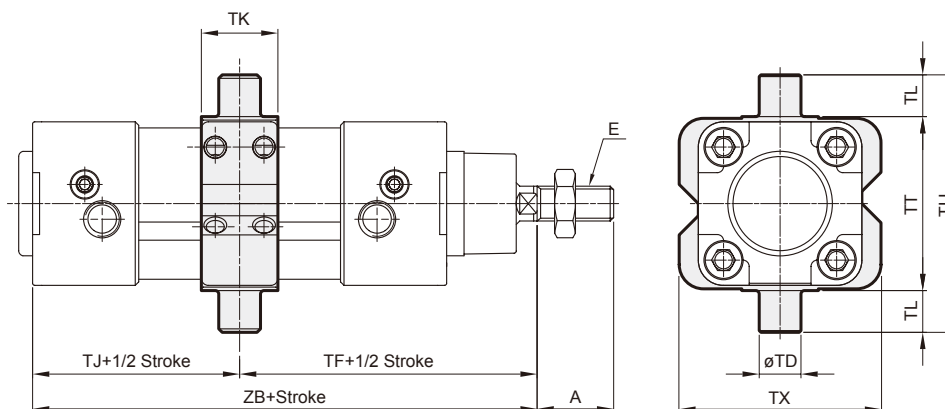


### CDB CB+Pin (Extra purchase)



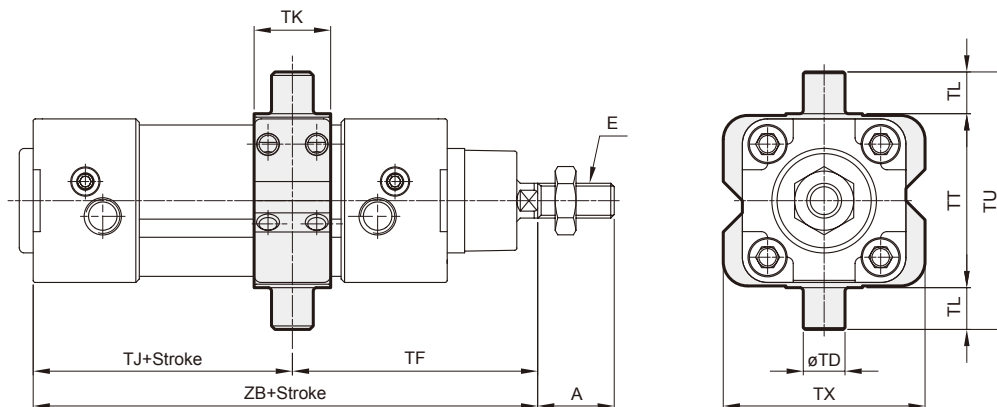
Code Tube I.D.	A	DA	DB	DC	DD	DE	DF	DG	DH	DI	DL	DS	DT	DX	DY	E	X	ZT
32	22	26	50	30	38	18	6	6	6.6	10	1.5	32	8	47.5	21	M10×1.25	47	142
40	24	28	53	34	41	22	6	6	6.6	12	1.5	36	10	52.5	24	M12×1.25	55	160
50	32	32	65	45	50	30	7.5	7.5	9	12	1.5	45	12	65.5	33	M16×1.5	65	170
63	32	40	67	50	52	35	7.5	7.5	9	16	1.5	50	12	75.5	37	M16×1.5	78	190
80	40	50	86	60	66	40	10	10	11	16	2.5	63	14	96.5	47	M20×1.5	95	210
100	40	60	96	70	76	50	10	10	11	20	2.5	71	15	113.5	55	M20×1.5	115	230

### TC



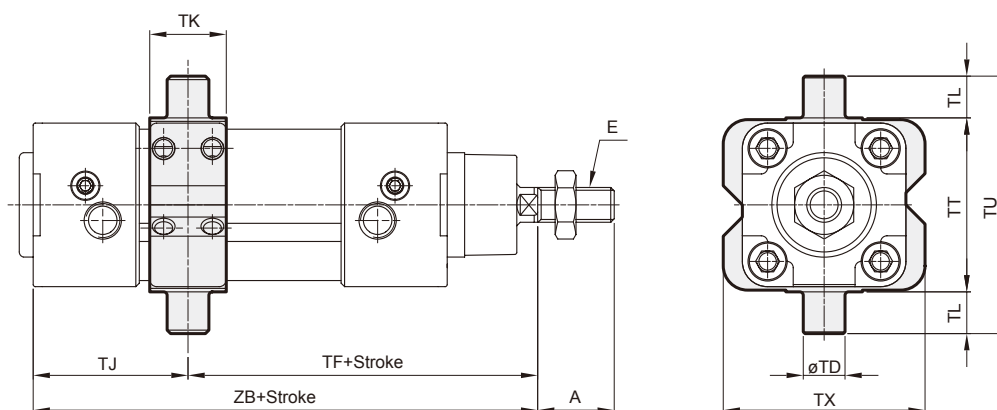
Code Tube I.D.	A	E	TD	TF	TJ	TK	TL	TT	TU	TX	ZB
32	22	M10×1.25	12 <sup>øB</sup>	73	47	22	12	50	74	58	120
40	24	M12×1.25	16 <sup>øB</sup>	82.5	52.5	28	16	63	95	70	135
50	32	M16×1.5	16 <sup>øB</sup>	90	53	32	16	75	107	85	143
63	32	M16×1.5	20 <sup>øB</sup>	97.5	60.5	35	20	90	130	100	158
80	40	M20×1.5	20 <sup>øB</sup>	110	64	40	20	110	150	120	174
100	40	M20×1.5	25 <sup>øB</sup>	120	69	45	25	132	182	145	189

### TA



Code Tube I.D.	A	E	TD	TF	Without magnet		Magnet		TK	TL	TT	TU	TX
					TJ	ZB	TJ	ZB					
32	22	M10×1.25	12 <sup>øB</sup>	70.5	49.5	120	79.5	150	22	12	50	74	58
40	24	M12×1.25	16 <sup>øB</sup>	81	54	135	84	165	28	16	63	95	70
50	32	M16×1.5	16 <sup>øB</sup>	87	56	143	86	173	32	16	75	107	85
63	32	M16×1.5	20 <sup>øB</sup>	90.5	67.5	158	97.5	188	35	20	90	130	100
80	40	M20×1.5	20 <sup>øB</sup>	104.5	69.5	174	109.5	214	40	20	110	150	120
100	40	M20×1.5	25 <sup>øB</sup>	113.5	75.5	189	115.5	229	45	25	132	182	145

### TB



Code Tube I.D.	A	E	TD	TJ	Without magnet		Magnet		TK	TL	TT	TU	TX
					TF	ZB	TF	ZB					
32	22	M10×1.25	12 <sup>øB</sup>	44.5	75.5	120	105.5	150	22	12	50	74	58
40	24	M12×1.25	16 <sup>øB</sup>	51	84	135	114	165	28	16	63	95	70
50	32	M16×1.5	16 <sup>øB</sup>	50	93	143	123	173	32	16	75	107	85
63	32	M16×1.5	20 <sup>øB</sup>	53.5	104.5	158	134.5	188	35	20	90	130	100
80	40	M20×1.5	20 <sup>øB</sup>	58.5	115.5	174	155.5	214	40	20	110	150	120
100	40	M20×1.5	25 <sup>øB</sup>	62.5	126.5	189	166.5	229	45	25	132	182	145

# MCQI2 Cylinder weight $\varnothing 32 \sim \varnothing 100$



## ISO-VDMA STANDARD PROFILE CYLINDER

Mindman

### Cylinder weight

Unit: kg

Model	Basic weight MCQI2-11	Basic weight (magnet) MCQI2-11	Stroke 25 mm MCQI2-11
Tube I.D.			
$\varnothing 32$	0.544	0.550	0.064
$\varnothing 40$	0.822	0.834	0.091
$\varnothing 50$	1.260	1.277	0.128
$\varnothing 63$	1.838	1.858	0.116
$\varnothing 80$	2.754	2.781	0.209
$\varnothing 100$	4.086	4.121	0.234

### Accessories weight

Unit: kg

Model	LB	CA	CB	CDB	FAC/FBC	TA/TB/TC	Y	I	Pin		YS
									Y / I	CA / CB	
Tube I.D.											
$\varnothing 32$	0.163	0.213	0.185	0.170	0.235	0.208	0.070	0.080	0.02	0.040	0.018
$\varnothing 40$	0.211	0.253	0.211	0.230	0.265	0.282	0.115	0.141	0.03	0.065	0.031
$\varnothing 50$	0.315	0.390	0.352	0.410	0.460	0.377	0.272	0.334	0.08	0.072	0.070
$\varnothing 63$	0.395	0.670	0.544	0.550	0.684	0.675	0.272	0.334	0.08	0.145	0.070
$\varnothing 80$	0.816	1.076	0.982	0.870	1.508	1.025	0.551	0.553	0.16	0.179	0.150
$\varnothing 100$	1.014	1.587	1.493	1.400	1.975	1.680	0.551	0.553	0.16	0.330	0.150