MCQA series

STANDARD CYLINDERS



Features:

■ Non-lubrication:

Designs of oil-filled alloy.special housing and bushing provide the needed self-lubrication of piston rod.

■ High quality-long service life:

Hard anodized aluminum cylinder tubes resist corrosion and abrasion.

■ Non-standard type:

Non-standard type is also available. For example, Stroke out of specification, dust cap, rod front end dimension variation etc.

■ Cylinder mountings:

Available with a comprehensive selection of mountings for fixed or flexible installation.

Table for standard stroke

Tube I.D.	Stroke(mm)
ϕ40	50,75,100,125,150,175,200,250,300,350,400,450,500
ϕ50,63	↑ 600
ϕ80,100	↑ 600,700
ϕ125,150	↑ 600,700,800,900,1000
ϕ200	↑ 600,700,800,900,1000,1500

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

Model	MCQA				
Tube I.D. (mm)	40,50,63	80,100	125	150	200
Medium	Air				
Operating pressure range	0.5~9.9 kgf/cm^2				
Proof pressure	15 kgf/cm^2				
Ambient temperature	−5~+60℃ (No freezing)				
Sensor switch	RCA				
Sensor switch holder	HV2	HV4	PM14	PM16	HA5

Order example:

MCQA − 11 − 40 − 100(M) − BSP

- MCQA: MODEL
- 11: **1**: Single Rod, **2**: Double Rod
- 40: TUBE I.D.
- 100: STROKE
- (M): **M**: Magnet
- BSP: PORT THREAD — Blank: PT thread, **BSP**: BSP thread, **NPT**: NPT thread

STYLE:

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

Mounting accessories:

LB − MCQA − 40

- LB: MOUNTING TYPE
- MCQA: MODEL
- 40: TUBE I.D.

	LB
	FAC
	FBC
	CA
	CB
	TC
	TA
	TB
	FA
	FB

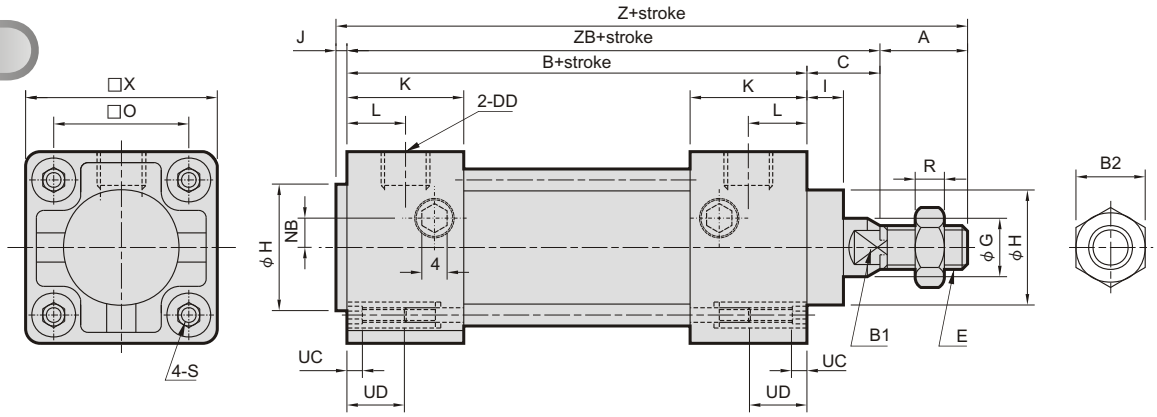
FA, FB: Only for ϕ40~ϕ63

MCQA Dimensions ϕ40~ϕ100

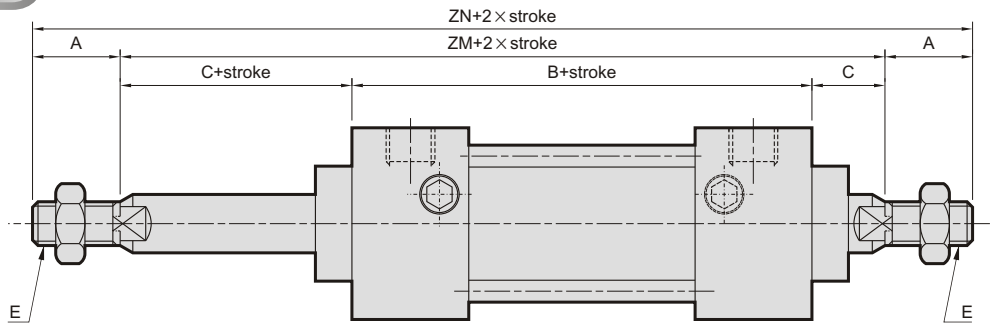
STANDARD CYLINDERS

Mindman

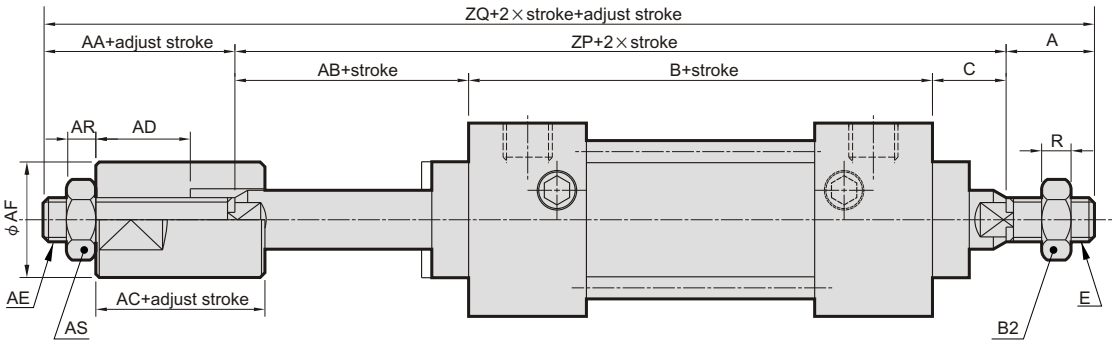
11



21

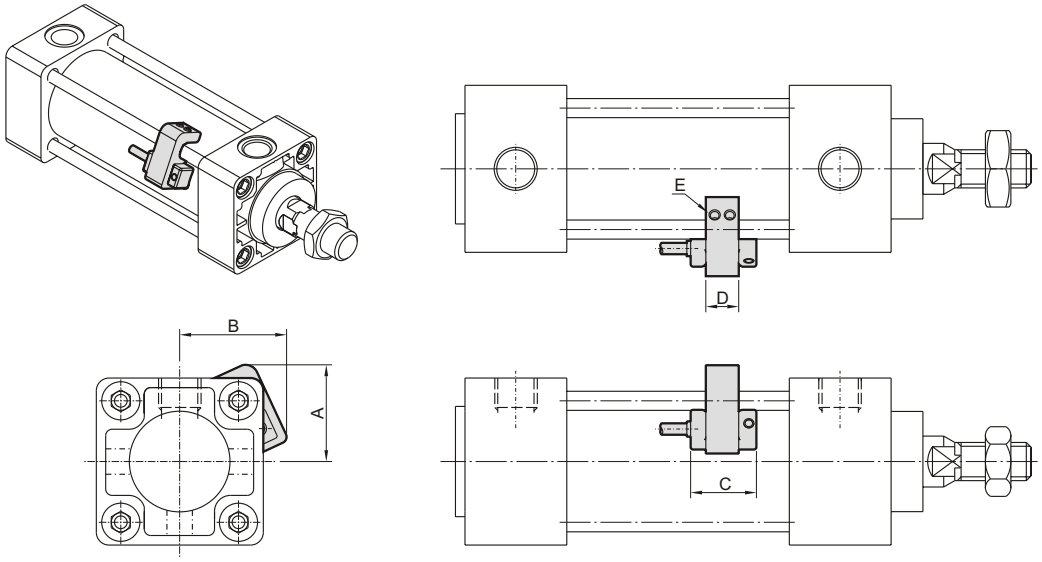


27



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	NB	O	R
40	30	21	18	12	7	M12×1.25	30	7	19	84	14	22	21	PT 1/4	M14×1.5	16	32	11	3	26	13	8	40.5	8
50	35	23	18	15	10	M16×1.5	40	8	24	90	17	27	23	PT 3/8	M18×1.5	20	40	11	3	28	14	0	48	11
63	35	23	18	15	10	M16×1.5	40	8	24	98	17	27	23	PT 3/8	M18×1.5	20	40	11	3	30	15	0	59	11
80	40	33	24	20	14	M22×1.5	50	13	32	116	22	32	31	PT 1/2	M22×1.5	25	45	15	4	34	17	0	74	13
100	40	33	24	20	14	M22×1.5	50	13	32	126	27	36	32	PT 1/2	M26×1.5	30	52	15	5	37	18.5	0	90	14

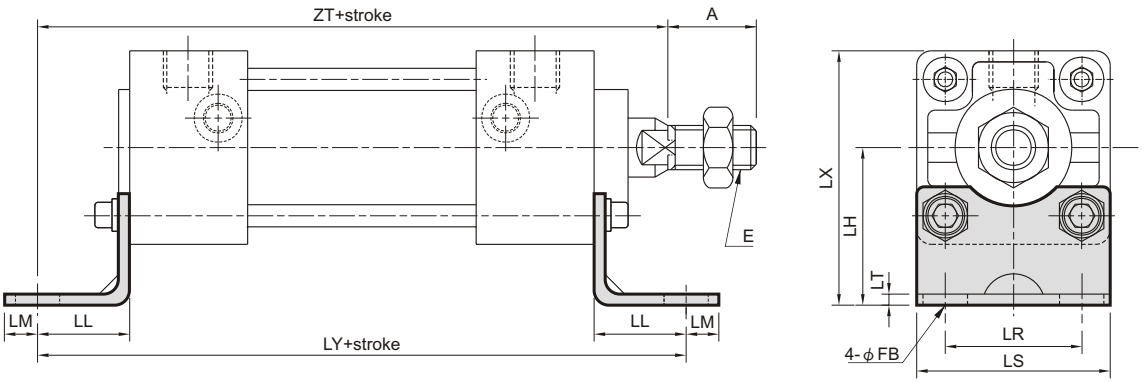
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40	M8×1.25	4	12	58	138	105	126	186	123	174
50	M8×1.25	4	12	66	151	113	136	206	131	189
63	M8×1.25	4	12	80	159	121	144	214	139	197
80	M12×1.75	4	15	100	191	147	178	258	171	244
100	M12×1.75	4	15	118	203	158	190	270	182	255



Code / Tube I.D.	Sensor switch	Hold	A	B	C	D	E
40	RCA	HV2	36	41	26	13	M4×10L
50	RCA	HV2	38	43	26	13	M4×10L
63	RCA	HV2	46	49	26	13	M4×10L
80	RCA	HV4	52	55	26	13	M4×10L
100	RCA	HV4	59	62	26	13	M4×10L
125	RCA	PM14	—	—	26	12	M4×10L
150	RCA	PM16	—	—	26	12	M4×10L
200	RCA	HA5	—	—	26	15	M4×10L

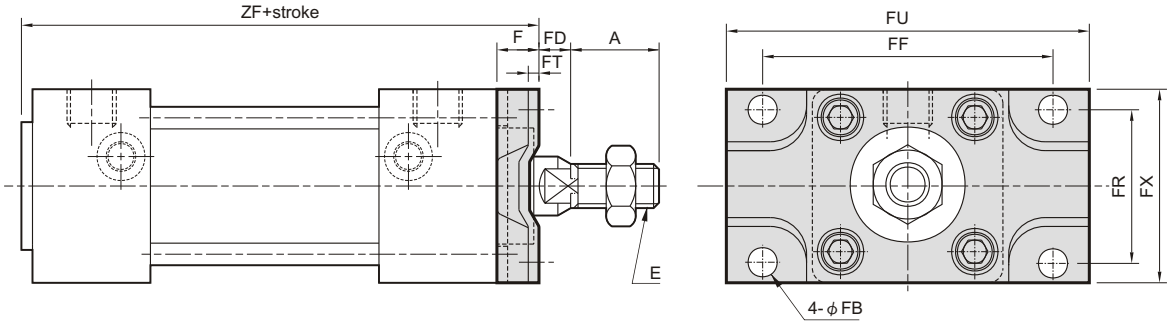
■ Mounting accessories

LB



Code / Tube I.D.	A	E	FB	LH	LL	LM	LR	LS	LT	LX	LY	ZT
40	30	M14×1.5	9	40	27	13	42	58	3.2	69	138	132
50	35	M18×1.5	9	45	27	13	50	66	3.2	78	144	140
63	35	M18×1.5	11.5	50	34	16	59	80	4.5	90	166	155
80	40	M22×1.5	14	65	44	16	76	100	6	115	204	191
100	40	M26×1.5	14	75	43	17	92	118	6	134	212	201

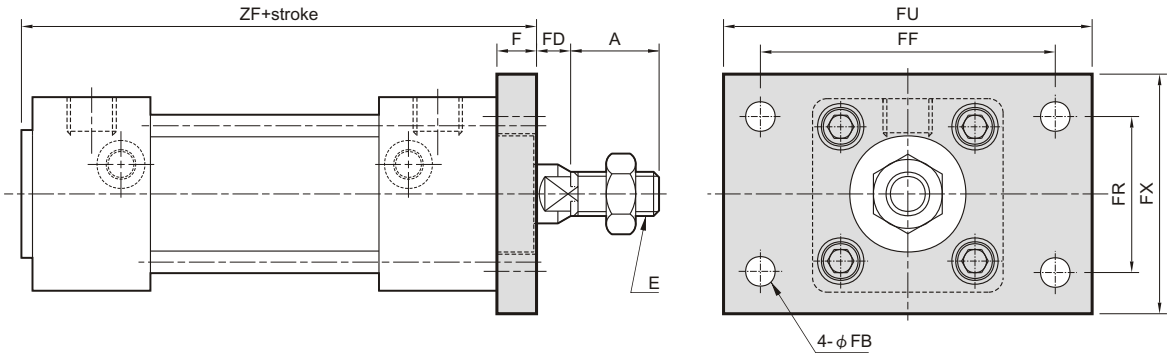
FA



Code / Tube I.D.	A	E	F	FB	FD	FF	FR	FT	FU	FX	ZF
40	30	M14×1.5	12	9	9	80	42	3.2	100	58	99
50	35	M18×1.5	12	9	11	90	50	3.2	110	66	105
63	35	M18×1.5	15	11.5	8	105	59	4.5	130	80	116

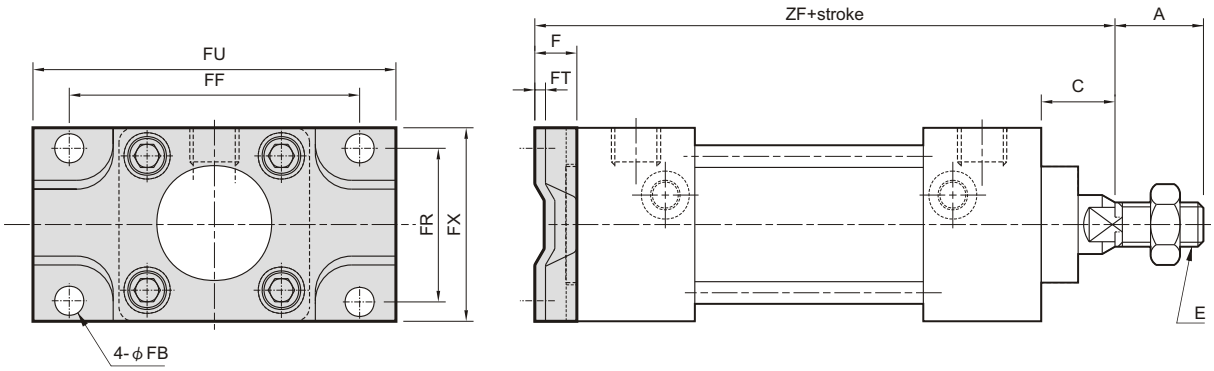
FAC

Note: Applicable to the stroke over 500mm



Code / Tube I.D.	A	E	F	FB	FD	FF	FR	FU	FX	ZF
40	30	M14×1.5	12	9	9	80	42	100	65	99
50	35	M18×1.5	12	9	11	90	50	110	73	105
63	35	M18×1.5	15	11.5	8	105	59	130	84	116
80	40	M22×1.5	18	14	13	130	76	160	108	138
100	40	M26×1.5	18	14	14	150	92	180	124	149

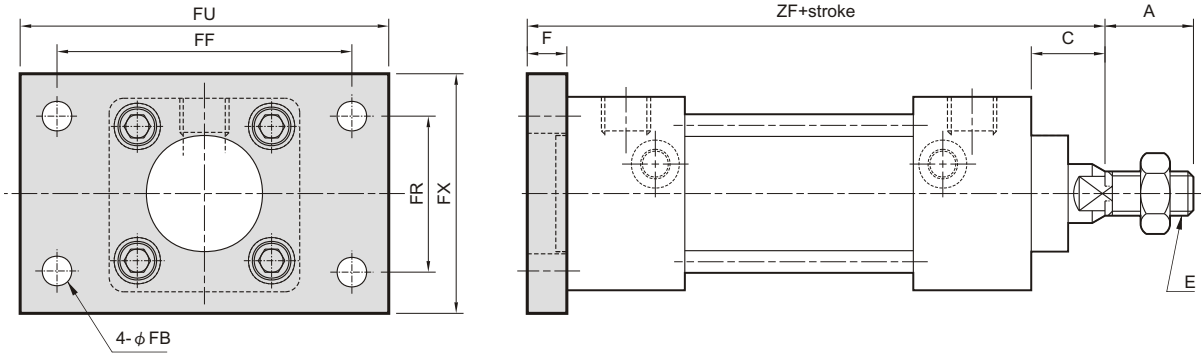
FB



Code / Tube I.D.	A	E	C	F	FB	FF	FR	FT	FU	FX	ZF
40	30	M14×1.5	21	12	9	80	42	3.2	100	58	117
50	35	M18×1.5	23	12	9	90	50	3.2	110	66	125
63	35	M18×1.5	23	15	11.5	105	59	4.5	130	80	136

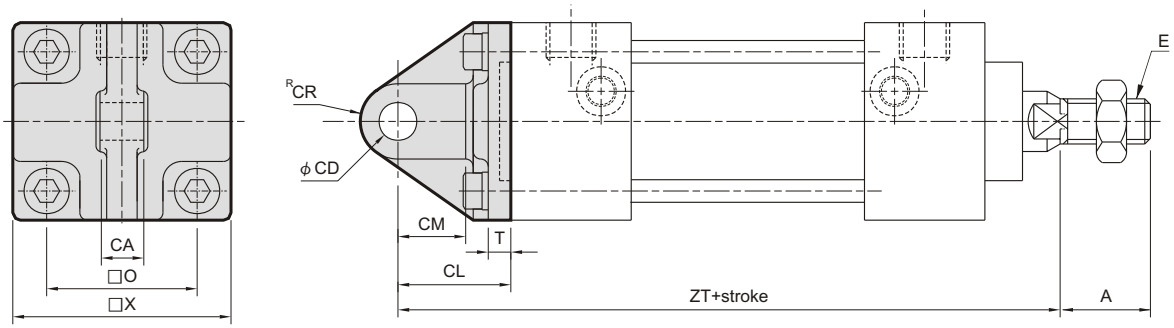
FBC

Note: Applicable to the stroke over 500mm



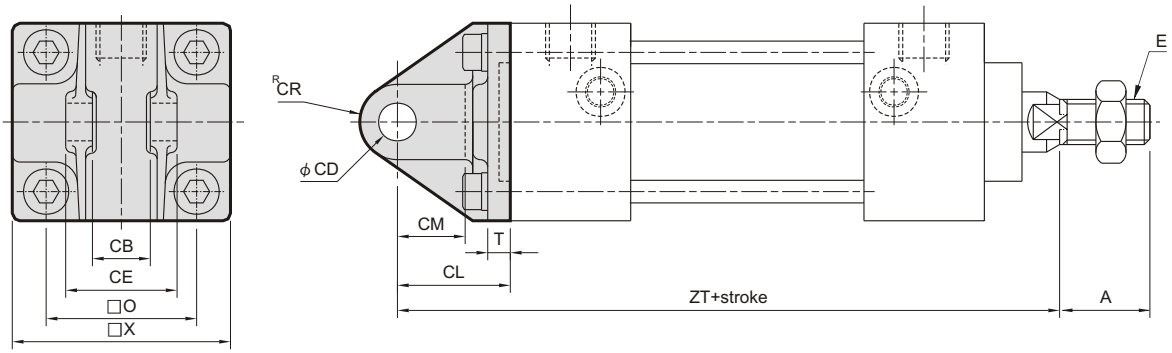
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40	30	21	M14×1.5	12	9	80	42	100	65	117
50	35	23	M18×1.5	12	9	90	50	110	73	125
63	35	23	M18×1.5	15	11.5	105	59	130	84	136
80	40	31	M22×1.5	18	14	130	76	160	108	165
100	40	32	M26×1.5	18	14	150	92	180	124	176

CA



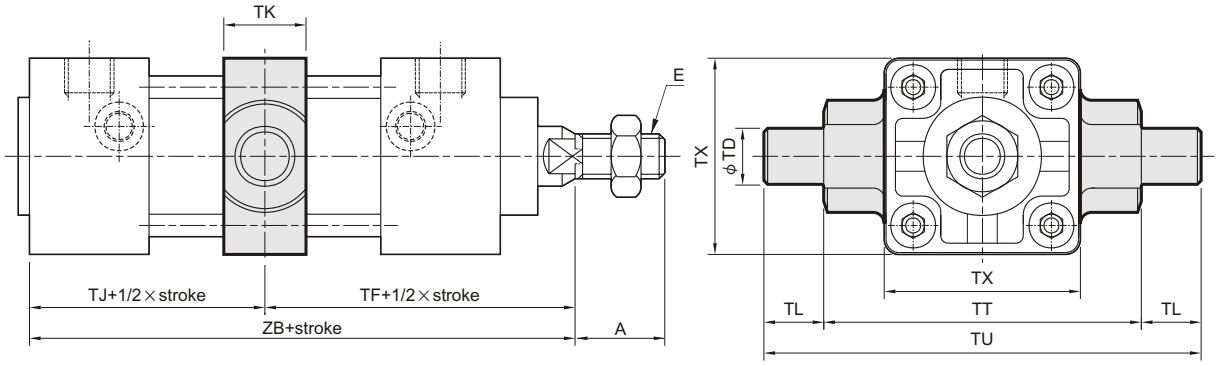
Code / Tube I.D.	A	CA	CD	CL	CM	CR	E	O	T	X	ZT
40	30	15 $^{-0.1}_{-0.3}$	10^{H10}	30	18	10	M14×1.5	40.5	5	58	135
50	35	18 $^{-0.1}_{-0.3}$	12^{H10}	35	22	12	M18×1.5	48	5	66	148
63	35	25 $^{-0.1}_{-0.3}$	16^{H10}	40	27	16	M18×1.5	59	5	80	161
80	40	31.5 $^{-0.1}_{-0.3}$	20^{H10}	48	30	20	M22×1.5	74	7.5	100	195
100	40	35.5 $^{-0.1}_{-0.3}$	25^{H10}	58	38	25	M26×1.5	90	7.5	118	216

CB



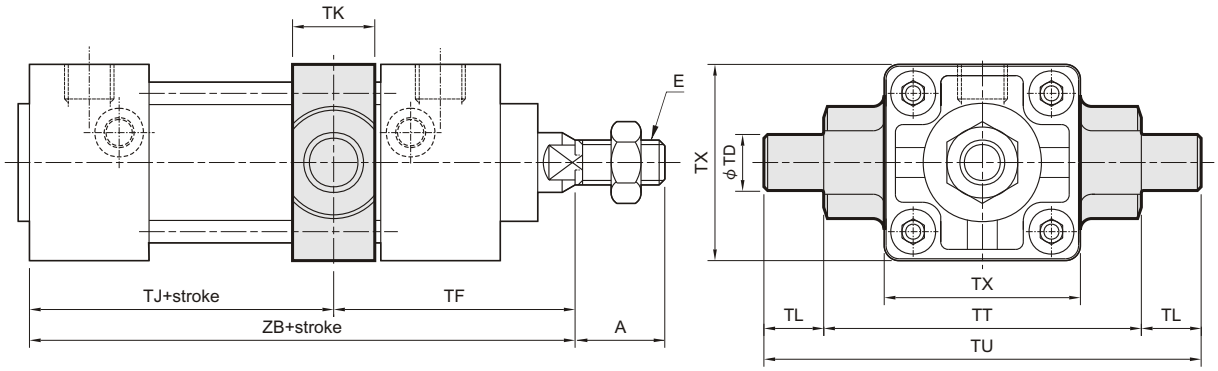
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40	30	15 $^{+0.3}_{+0.1}$	10^{H10}	29.5	30	18	10	M14×1.5	40.5	5	58	135
50	35	18 $^{+0.3}_{+0.1}$	12^{H10}	38	35	22	12	M18×1.5	48	5	66	148
63	35	25 $^{+0.3}_{+0.1}$	16^{H10}	49	40	27	16	M18×1.5	59	5	80	161
80	40	31.5 $^{+0.3}_{+0.1}$	20^{H10}	59	48	30	20	M22×1.5	74	7.5	100	195
100	40	35.5 $^{+0.3}_{+0.1}$	25^{H10}	64	58	38	25	M26×1.5	90	7.5	118	216

TC



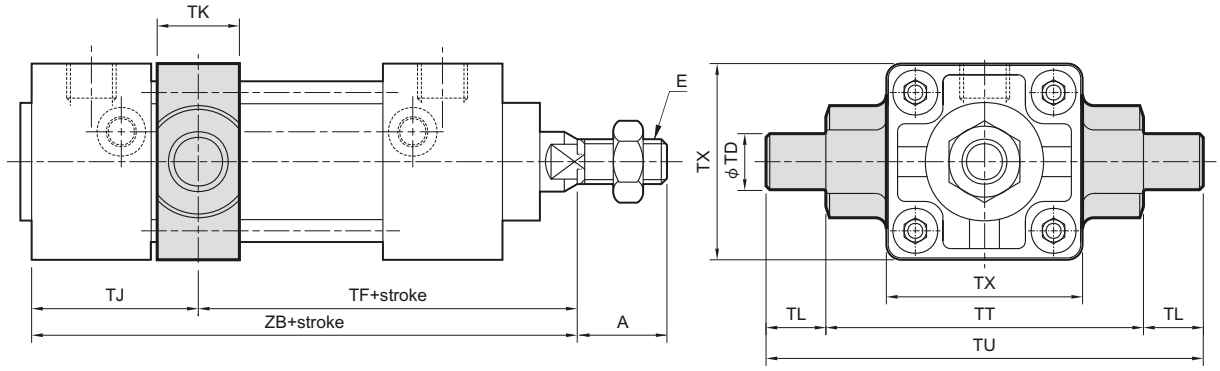
Code / Tube I.D.	A	E	TD	TF	TJ	TK	TL	TT	TU	TX	ZB
40	30	M14×1.5	15^{e8}	63	42	22	16	85	117	58	105
50	35	M18×1.5	15^{e8}	68	45	22	16	95	127	67	113
63	35	M18×1.5	18^{e8}	72	49	28	19	110	148	82	121
80	40	M22×1.5	25^{e8}	89	58	34	26	140	192	102	147
100	40	M26×1.5	25^{e8}	95	63	40	26	162	214	122	158

TA



Code / Tube I.D.	A	E	TD	TF	without magnet		magnet		TK	TL	TT	TU	TX
					TJ	ZB	TJ	ZB					
40	30	M14×1.5	15^{e8}	60	45	105	75	135	22	16	85	117	58
50	35	M18×1.5	15^{e8}	64	49	113	79	143	22	16	95	127	67
63	35	M18×1.5	18^{e8}	69	52	121	82	151	28	19	110	148	82
80	40	M22×1.5	25^{e8}	85	62	147	102	187	34	26	140	192	102
100	40	M26×1.5	25^{e8}	92	66	158	106	198	40	26	162	214	122

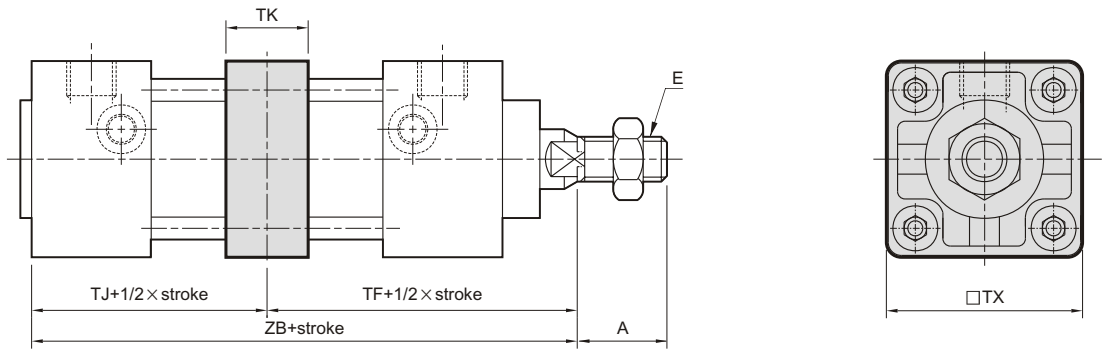
TB



Code / Tube I.D.	A	E	TD	without magnet		magnet		TJ	TK	TL	TT	TU	TX
				TF	ZB	TF	ZB						
40	30	M14×1.5	15^{e8}	66	105	96	135	39	22	16	85	117	58
50	35	M18×1.5	15^{e8}	72	113	102	143	41	22	16	95	127	67
63	35	M18×1.5	18^{e8}	75	121	105	151	46	28	19	110	148	82
80	40	M22×1.5	25^{e8}	93	147	133	187	54	34	26	140	192	102
100	40	M26×1.5	25^{e8}	98	158	138	198	60	40	26	162	214	122

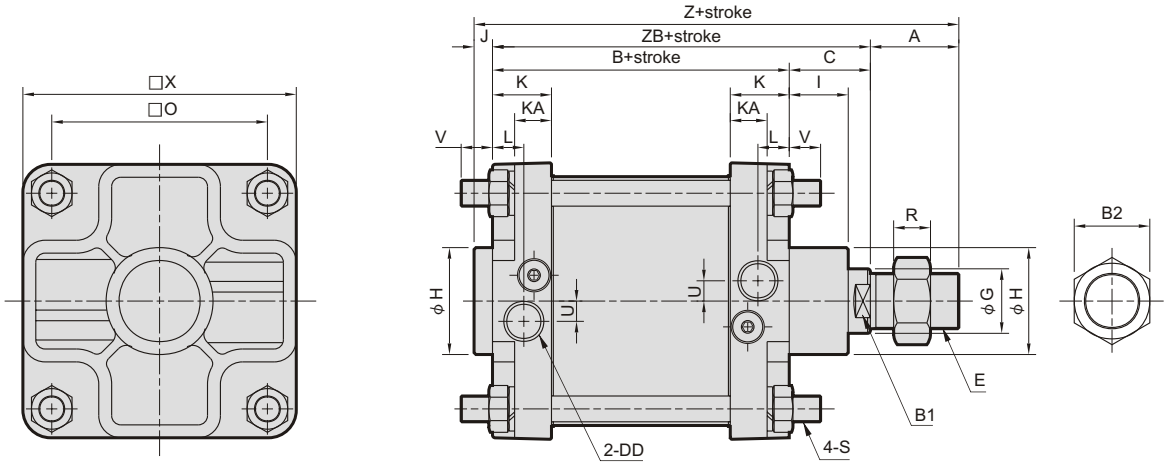
SDS

Stroke over 1000mm



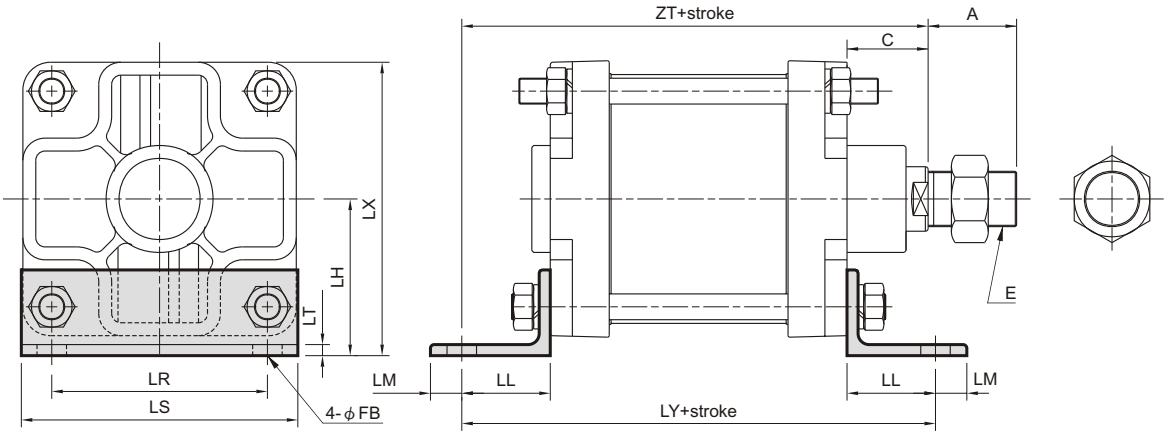
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50	35	M18×1.5	68	45	22	67	113
63	35	M18×1.5	72	49	28	82	121
80	40	M22×1.5	89	58	34	102	147
100	40	M26×1.5	95	63	40	122	158

11



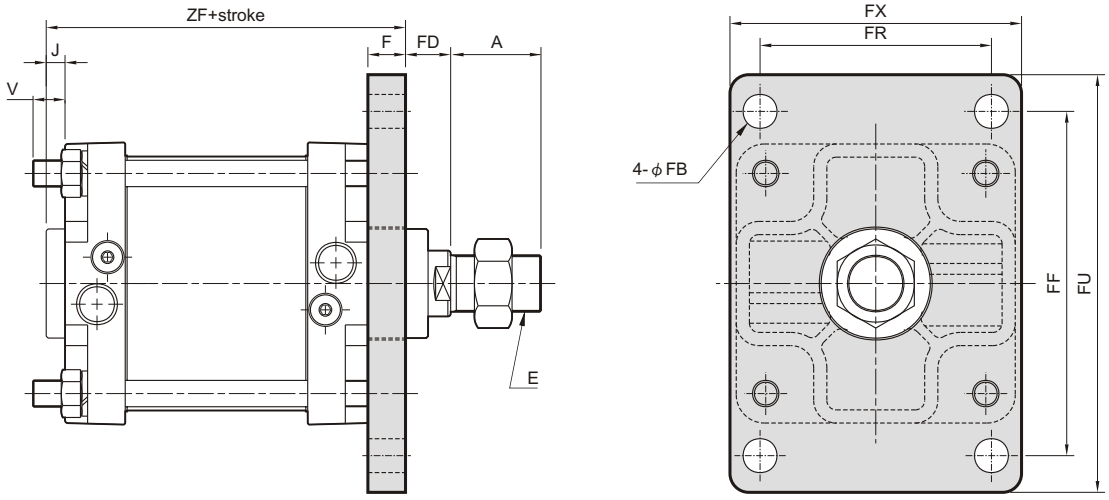
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125	45	136	30	41	47	PT 1/2	M30×1.5	35	58	32	10	32	20	17	117	15	M14×1.5	11	20	150	238	183
150	50	153	30	41	47	PT 1/2	M30×1.5	40	60	32	8	40.5	25	24.5	134	15	M16×1.5	12	26	175	258	200
200	63	154	46	70	67	PT 3/4	M45×1.5	50	74	35	8	42	25	24	182	27	M20×1.5	12	18	226	292	221

LB



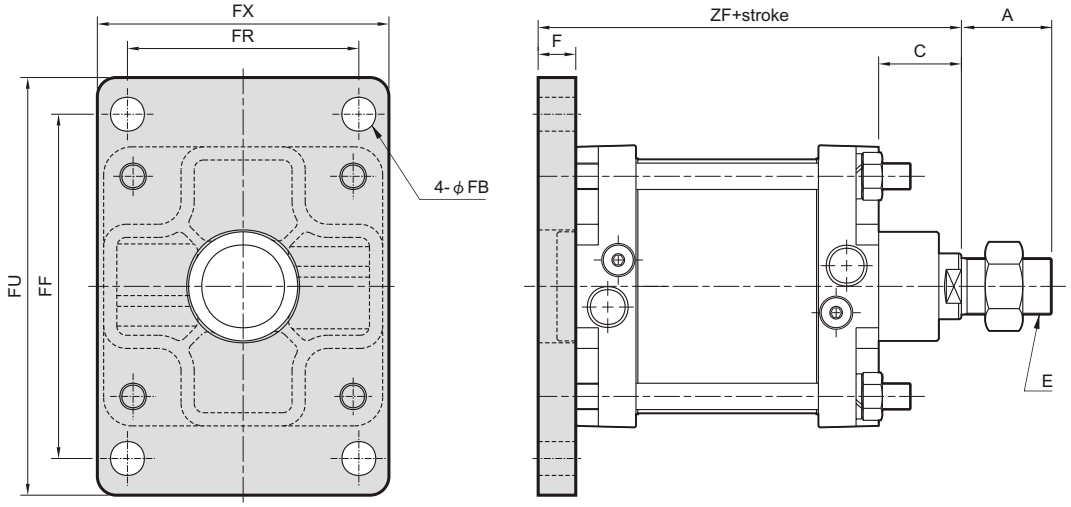
Code / Tube I.D.	A	E	FB	LH	LL	LM	LR	LS	LT	LX	LY	ZT
125	45	M30×1.5	16	85	48	17	117	150	6	162	232	231
150	50	M30×1.5	18	96.5	55	20	134	175	9	184	263	255
200	63	M45×1.5	24	132	60	30	150	226	10	245	274	281

FAC



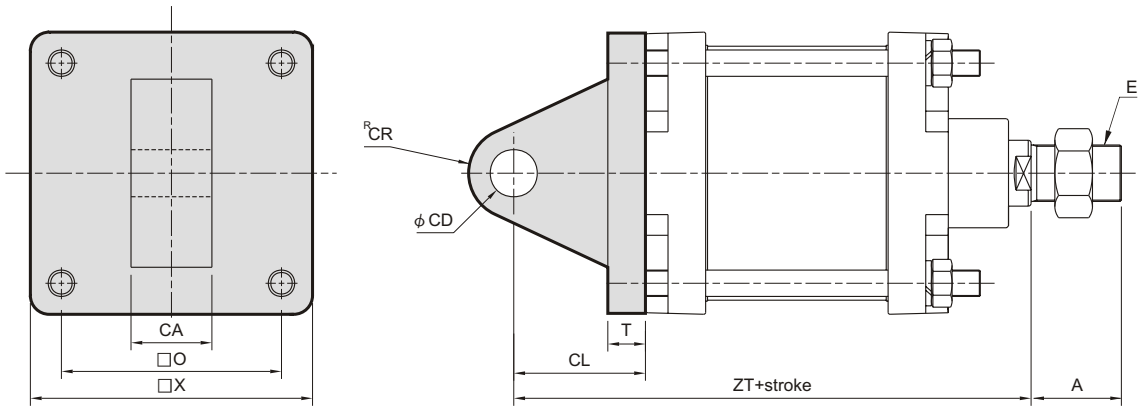
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125	45	M30×1.5	20	18	27	183	123	222	155	10	20	166
150	50	M30×1.5	20	18	27	230	134	275	185	8	32	181
200	63	M45×1.5	25	24	42	280	150	335	225	8	11	187

FBC



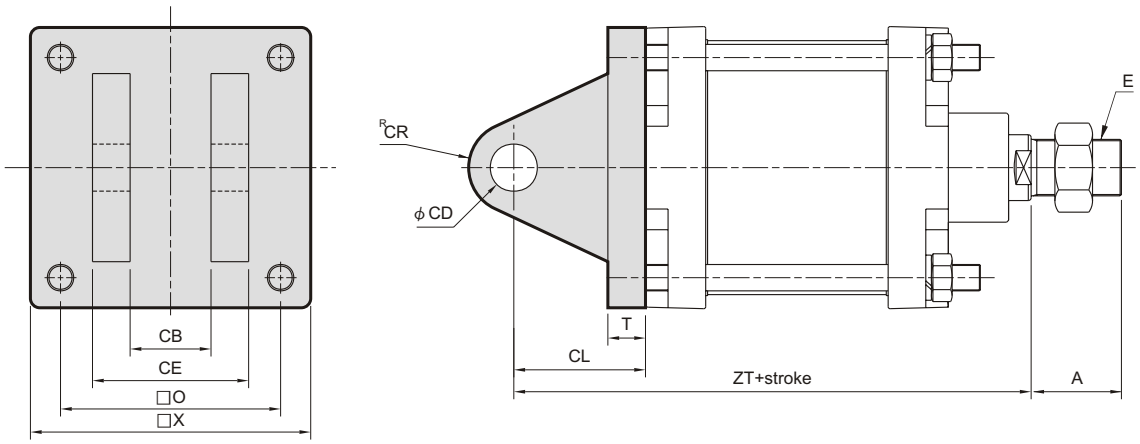
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200	63	67	M45×1.5	25	24	280	150	335	225	246

CA



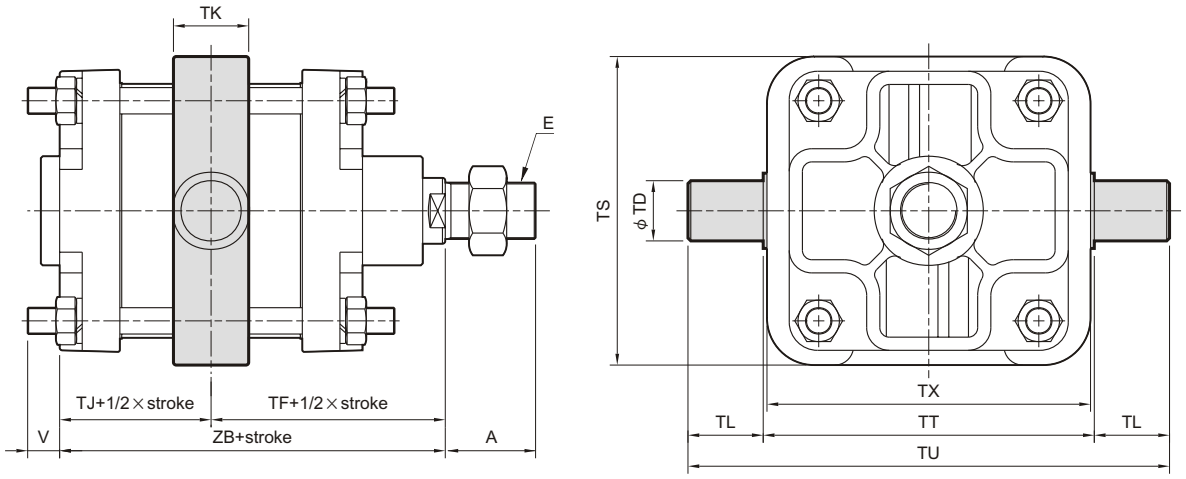
Code / Tube I.D.	A	CA	CD	CL	CR	E	O	T	X	ZT
125	45	$43^{-0.1}_{-0.3}$	25^{H10}	65	24	M30×1.5	117	15	150	248
150	50	$40^{-0.1}_{-0.3}$	30^{H10}	78	27.5	M30×1.5	134	20	175	278
200	63	$50^{-0.1}_{-0.3}$	40^{H10}	85	40	M45×1.5	182	25	226	306

CB



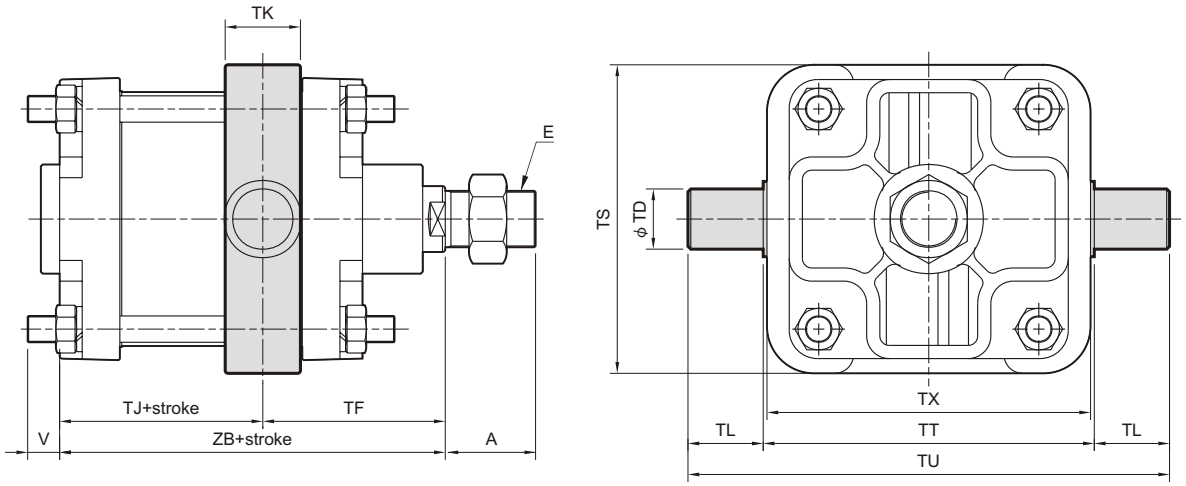
Code / Tube I.D.	A	CB	CD	CE	CL	CR	E	O	T	X	ZT
125	45	$43^{+0.3}_{+0.1}$	25^{H10}	83	70	24	M30×1.5	117	20	150	253
150	50	$40^{+0.3}_{+0.1}$	30^{H10}	90	78	27.5	M30×1.5	134	20	175	278
200	63	$50^{+0.3}_{+0.1}$	40^{H10}	100	85	40	M45×1.5	182	25	226	306

TC



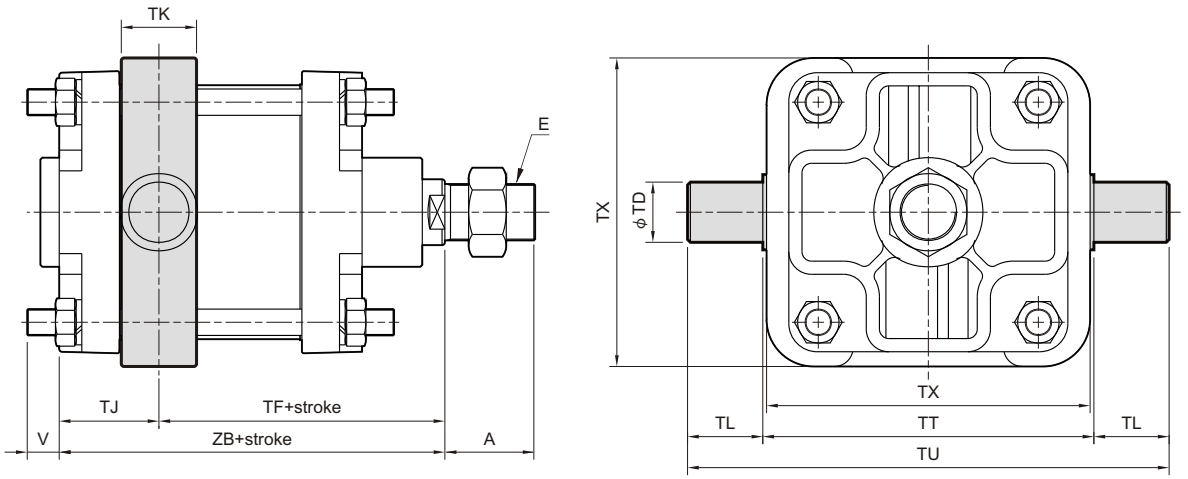
Code / Tube I.D.	A	E	TD	TF	TJ	TK	TL	TS	TT	TU	TX	V	ZB
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150	50	M30×1.5	35^{e8}	123.5	76.5	41	40	194	200	280	198	16	200
200	63	M45×1.5	45^{e8}	144	77	59	45	255	265	355	255	8.5	221

TA



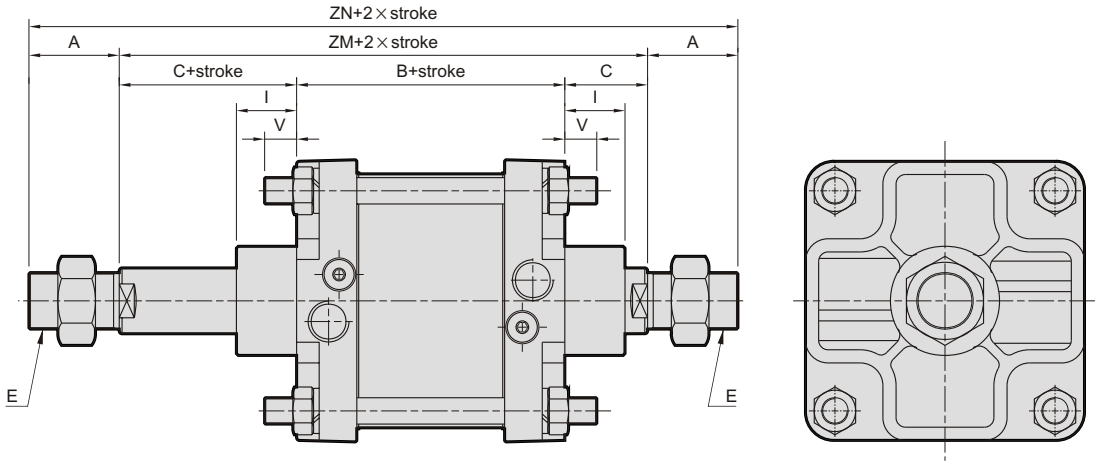
Code / Tube I.D.	A	E	TD	TF	TJ	TK	TL	TS	TT	TU	TX	V	ZB
125	45	M30×1.5	32^{e8}	100	83	40	40	164	176	256	172	17	183
150	50	M30×1.5	35^{e8}	109	91	41	40	194	200	280	198	16	200
200	63	M45×1.5	45^{e8}	139.5	81.5	59	45	255	265	355	255	8.5	221

TB



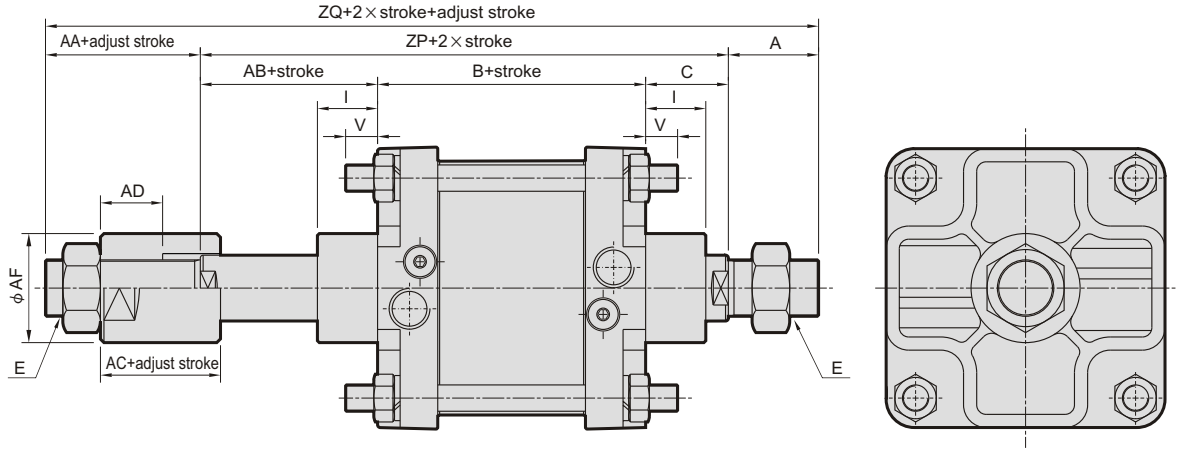
Code / Tube I.D.	A	E	TD	TF	TJ	TK	TL	TS	TT	TU	TX	V	ZB
125	45	M30×1.5	32^{e8}	130	53	40	40	164	176	256	172	17	183
150	50	M30×1.5	35^{e8}	138	62	41	40	194	200	280	198	16	200
200	63	M45×1.5	45^{e8}	148.5	72.5	59	45	255	265	355	255	8.5	221

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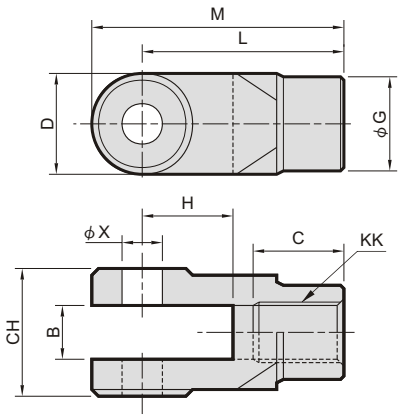
Code / Tube I.D.	A	B	C	E	I	V	ZM	ZN
125	45	136	47	M30×1.5	32	20	230	320
150	50	153	47	M30×1.5	32	26	247	347
200	63	154	67	M45×1.5	35	18	288	414

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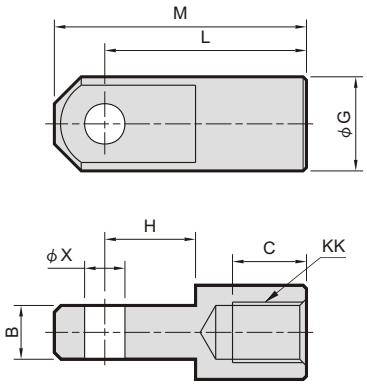


Code / Tube I.D.	A	AA	AB	AC	AD	AF	B	C	E	I	V	ZM	ZN	ZP	ZQ
125	45	38	47	30	18	60	136	47	M30×1.5	32	20	230	320	230	313
150	50	38	47	30	18	60	153	47	M30×1.5	32	26	247	347	247	335
200	63	38	50	30	18	70	154	67	M45×1.5	35	18	288	414	271	372

Y connector

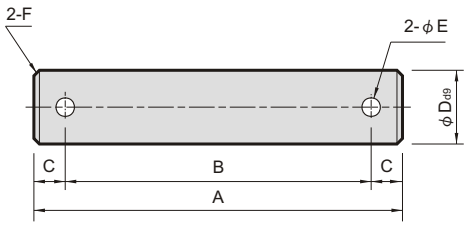


I connector



Code / Tube I.D	B		C		CH		D		G		H		KK		L		M		X H10
	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	
40	$16^{+0.3}_{+0.1}$	$16^{-0.1}_{-0.3}$	25	20	38		26		ϕ24	ϕ24	25	25	M14×1.5		55	55	68	68	$\phi12^{+0.07}_{0}$
50 63	$16^{+0.3}_{+0.1}$	$16^{-0.1}_{-0.3}$	27	22	38		30		ϕ28	ϕ28	27	27	M18×1.5		60	60	75	75	$\phi12^{+0.07}_{0}$
80	$28^{+0.3}_{+0.1}$	$28^{-0.1}_{-0.3}$	32	27	55		38		ϕ36	ϕ36	32	32	M22×1.5		71	71	90	90	$\phi18^{+0.07}_{0}$
100	$30^{+0.3}_{+0.1}$	$30^{-0.1}_{-0.3}$	35	30	59		42		ϕ40	ϕ40	38	38	M26×1.5		83	83	104	104	$\phi20^{+0.08}_{0}$
125	$32^{+0.3}_{+0.1}$	$32^{-0.1}_{-0.3}$	35	40	76		58		ϕ45	ϕ49	38	32	M30×1.5		80	80	109	109	$\phi20^{+0.08}_{0}$
150	$40^{+0.3}_{+0.1}$	$40^{-0.1}_{-0.3}$	35	40	84		54		ϕ45	ϕ60	39	32	M30×1.5		80	80	107	107	$\phi25^{+0.08}_{0}$
200	$50^{+0.3}_{+0.1}$	$50^{-0.1}_{-0.3}$	67	67	100		85		ϕ70	ϕ70	54	44	M45×1.5		125	125	167.5	167.5	$\phi40^{+0.1}_{0}$

Pin



for Y & I connector

Code / Tube I.D	A	B	C	D d9	E	F	Split pin
40 ~ 63	57	46	5.5	$\phi12^{-0.05}_{-0.09}$	3.2	1.0	3.2×20L
80	78	64	7	$\phi18^{-0.05}_{-0.09}$	4	1.2	4×25L
100	87	70	8.5	$\phi20^{-0.06}_{-0.12}$	5	1.5	5×35L
125	100	83	8.5	$\phi20^{-0.06}_{-0.12}$	5	1.5	5×35L
150	112	95	8.5	$\phi25^{-0.06}_{-0.12}$	5	2.0	5×35L
200	115	105	5	$\phi40^{-0.08}_{-0.14}$	5	2.0	5×55L

for CA & CB

Code / Tube I.D	A	B	C	D d9	E	F	Split pin
40	48	37	5.5	$\phi10^{-0.05}_{-0.09}$	3.2	1.0	3.2×20L
50	57	46	5.5	$\phi12^{-0.05}_{-0.09}$	3.2	1.0	3.2×20L
63	72	58	7	$\phi16^{-0.05}_{-0.09}$	4	1.2	4×25L
80	87	70	8.5	$\phi20^{-0.06}_{-0.12}$	5	1.5	5×35L
100	93	76	8.5	$\phi25^{-0.06}_{-0.12}$	5	1.5	5×35L
125	112	95	8.5	$\phi25^{-0.06}_{-0.12}$	5	1.5	5×35L
150	119	102	8.5	$\phi30^{-0.06}_{-0.12}$	5	2.0	5×40L
200	115	105	5	$\phi40^{-0.08}_{-0.14}$	5	2.0	5×55L

MCQA Solenoid valve link seats ϕ40~ϕ100

STANDARD CYLINDERS

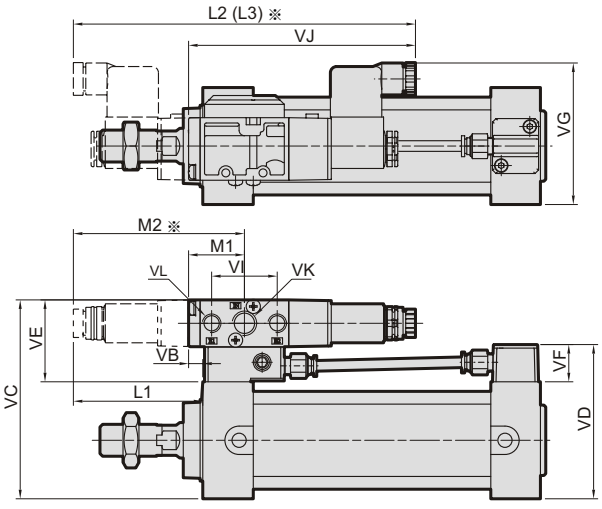
Order example:

MCQA— **As standard order example** — VR—4E2C—AC110

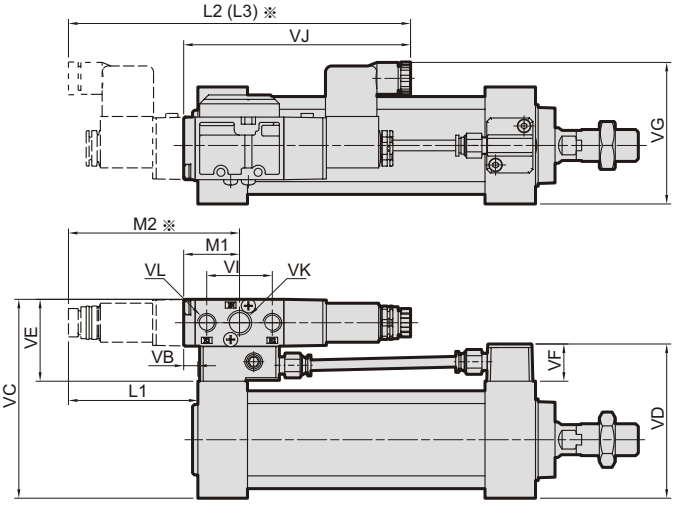
- MODEL
- SOLENOID VALVE LINK SEATS
  - **VR**: Rod cover
  - **VH**: Head cover
- **4**: 4way
- **E1**: Single Solenoid
  E2: Double Solenoid
- **C**: Closed center
  P: Pressure center
  R: Exhaust center
  （Only for 4E2）
- VOLTAGE
  AC220V(50/60)Hz
  AC110V(50/60)Hz
  DC24V

※：1. MCQA-ϕ40~ϕ63（for MVSC-260 valve）。
2. MCQA-ϕ80, ϕ100（for MVSC-300 valve）。

VR



VH



Code / Tube I.D.	L1	L2	L3	M1	M2	VB	VC	VD	VE	VF	VG	VI	VJ	VK	VL	Valve type
40	77.5	199	220	31.5	99.5	9.5	104.2	79	46.2	21	76	37	131	PT 1/4	PT 1/8	MVSC-260
50	78.5	199	220	31.5	99.5	8.5	112.2	87	46.2	21	80	37	131	PT 1/4	PT 1/8	MVSC-260
63	79.5	199	220	31.5	99.5	7.5	126.2	101	46.2	21	87	37	131	PT 1/4	PT 1/8	MVSC-260
80	80.5	222	275	45	111	14.5	159	128	59	28	90	52	156	PT 3/8	PT 3/8	MVSC-300
100	78.5	222	275	45	111	12.5	179	146	59	28	104	52	156	PT 3/8	PT 3/8	MVSC-300

※ L2 for 4E2 size, L3 for 4E2C.P.R size, M2 for 4E2 and 4E2C.P.R size.