



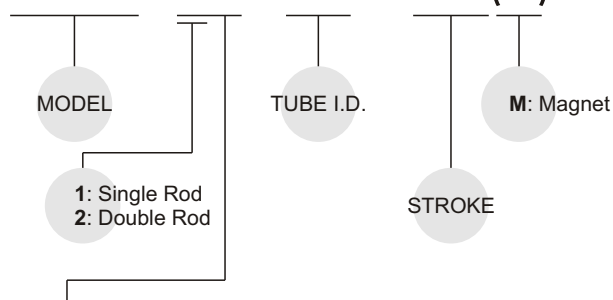
Table for standard stroke

Tube I.D.	Stroke (mm)
φ 32,40	50,75,100,125,150,175,200,250,300,350,400,450,500
φ 50,63	↑ 600
φ 80,100,125,160	↑ 600,700




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

Order example:

MCQV – 11 – 40 – 100(M)



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)

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.

■ ISO-VDMA standard specification:

Conformance to ISO-6431 & VDMA-24562 specification. Unified design, most parts of each type are interchangeable among each other.

■ Cylinder mountings:

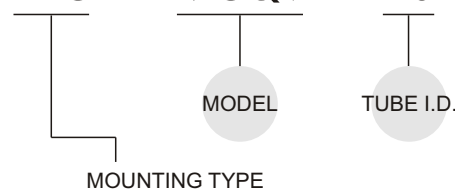
Available with a comprehensive selection of mountings for fixed or flexible installation.










■ Port thread PT. NPT. are also available.

Model	MCQV				
Tube I.D. (mm)	32,40	50,63	80,100	125	160
Medium	Air				
Operating pressure range	0.5~9.9 kgf/cm ²				
Proof pressure	15 kgf/cm ²				
Ambient temperature	-5~+60°C (No freezing)				
Sensor switch	RCA				
Sensor switch holder	HV1	HV2	HV3	HV4	PM16

Mounting accessories:

FAC – MCQV – 40



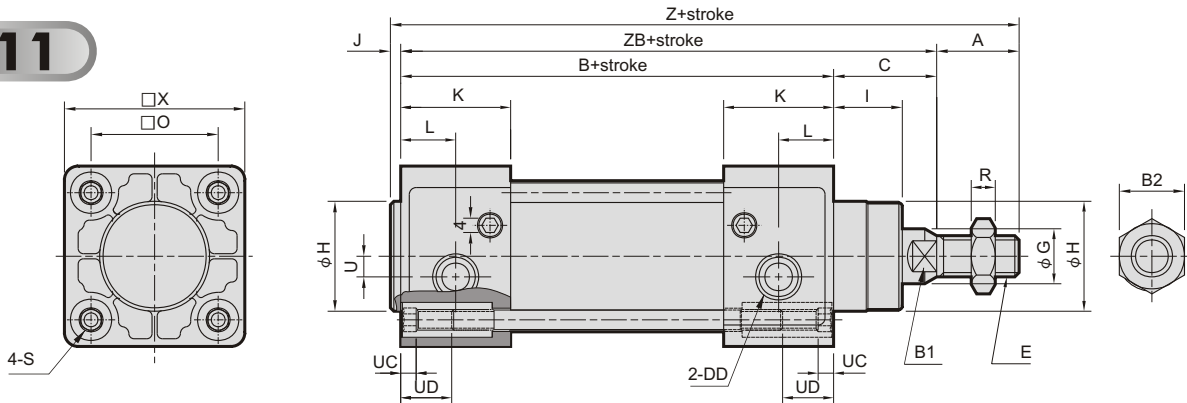
	LB
	FAC
	FBC
	CA
	CB
	CDB (+CB+Pin)
	TC
	TA
	TB

MCQV Dimensions $\phi 32 \sim \phi 100$

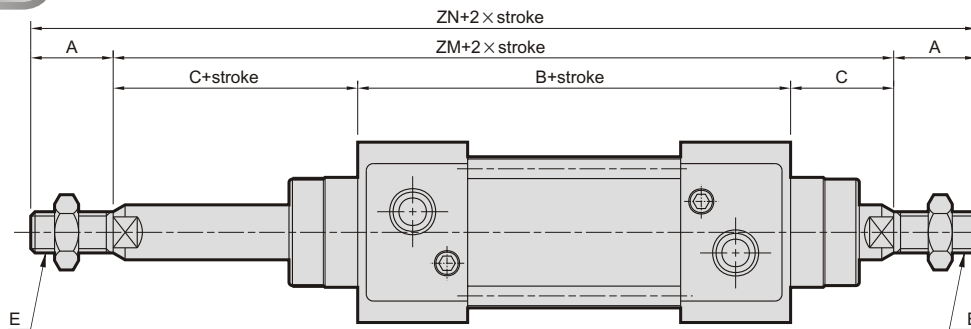
ISO-VDMA STANDARD CYLINDERS



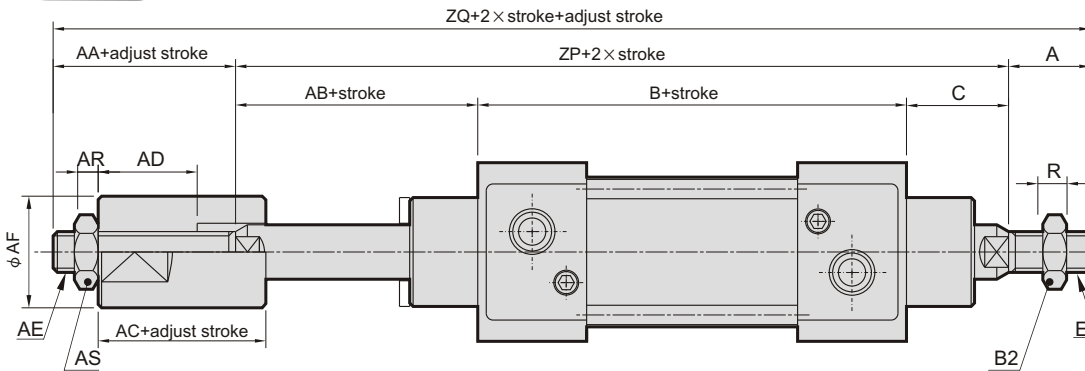
11



21



27

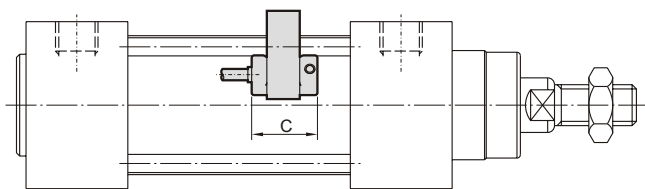
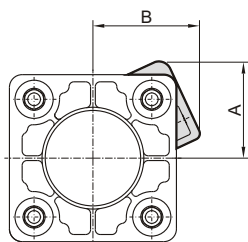
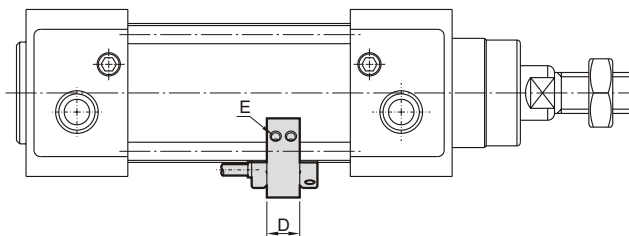
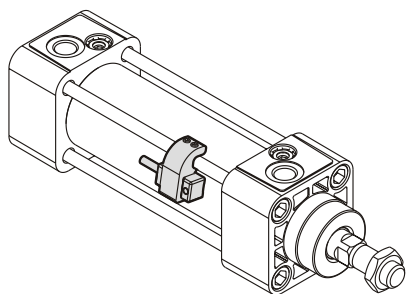


Code Tube I.D.	A	AA	AB	AC	AD	AE	AF	AR	AS	B	B1	B2	C	DD	E	G	H	I	J	K	L	O	R
32	22	19	23	12	7	M10×1.25	20	6	17	94	10	17	26	G 1/8	M10×1.25	12	30	16	4	26	13	32.5	5
40	24	20	27	12	7	M12×1.25	30	7	19	105	13	19	30	G 1/4	M12×1.25	16	35	20	4	30	15	38	6
50	32	20	32	15	10	M16×1.5	40	8	24	106	16	24	37	G 1/4	M16×1.5	20	40	25	4	30	15	46.5	8
63	32	20	32	15	10	M16×1.5	40	8	24	121	16	24	37	G 3/8	M16×1.5	20	45	25	4	32	16	56.5	8
80	40	32	41	20	14	M22×1.5	50	13	32	128	21	30	46	G 3/8	M20×1.5	25	45	32	4	38	19	72	10
100	40	32	44	20	14	M22×1.5	50	13	32	138	21	30	51	G 1/2	M20×1.5	25	55	35	4	40	21	89	10

Code Tube I.D.	S	U	UC	UD	X	Z	ZB	ZM	ZN	ZP	ZQ
32	M6×1.0	5	4	12	47	146	120	146	190	143	184
40	M6×1.0	4	4	12	53	163	135	165	213	162	206
50	M8×1.25	4	4	16	65	179	143	180	244	175	227
63	M8×1.25	7	4	16	75	194	158	195	259	190	242
80	M10×1.5	7	4	18	95	218	174	220	300	215	287
100	M10×1.5	7	4	18	115	233	189	240	320	233	305

MCQV Installation of sensor switch $\phi 32 \sim \phi 160$

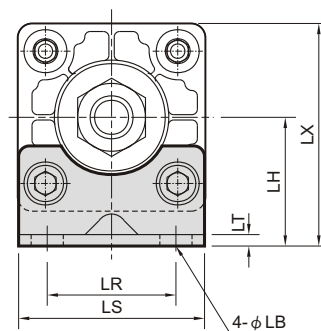
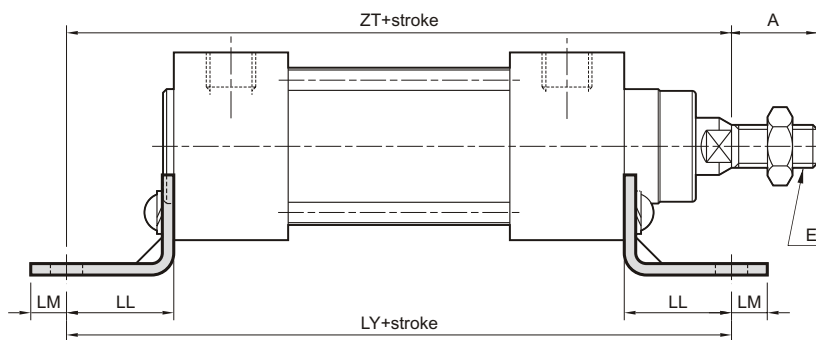
ISO-VDMA STANDARD CYLINDERS



Code Tube I.D.	Sensor switch	Hold	A	B	C	D	E
32	RCA	HV1	26.5	33.5	26	13	M4 × 10L
40	RCA	HV1	29.5	36.5	26	13	M4 × 10L
50	RCA	HV2	37.5	41.5	26	13	M4 × 10L
63	RCA	HV2	42.5	46.5	26	13	M4 × 10L
80	RCA	HV3	49.5	54.5	26	13	M5 × 16L
100	RCA	HV3	57.5	62.5	26	13	M5 × 16L
125	RCA	HV4	—	—	26	13	M4 × 10L
160	RCA	PM16	—	—	26	12	M4 × 10L

■ Mounting accessories

LB



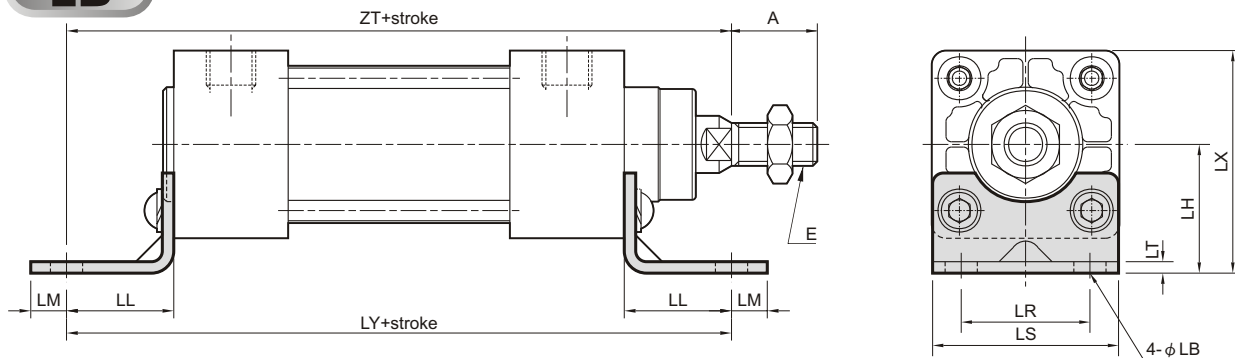
Code Tube I.D.	A	E	LB	LH	LL	LM	LR	LS	LT	LX	LY	ZT
32	22	M10 × 1.25	7	32	24	8	32	47	5	55.5	142	144
40	24	M12 × 1.25	9	36	28	10	36	53	5	62.2	161	163
50	32	M16 × 1.5	9	45	32	10	45	65	5	77.5	170	175
63	32	M16 × 1.5	9	50	32	10	50	75	5	87.5	185	190
80	40	M20 × 1.5	12	63	41	13	63	95	6	110.5	210	215
100	40	M20 × 1.5	14	71	41	13	75	115	6	128.5	220	230

MCQV Mounting accessories $\phi 32\sim\phi 100$

ISO-VDMA STANDARD CYLINDERS

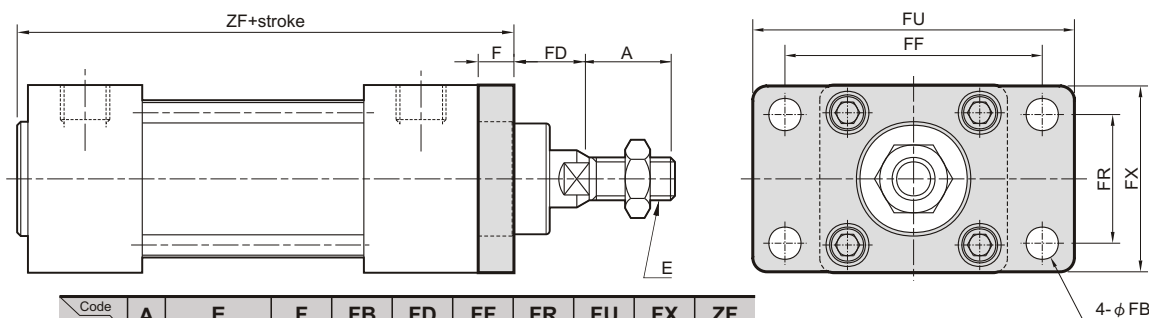


LB



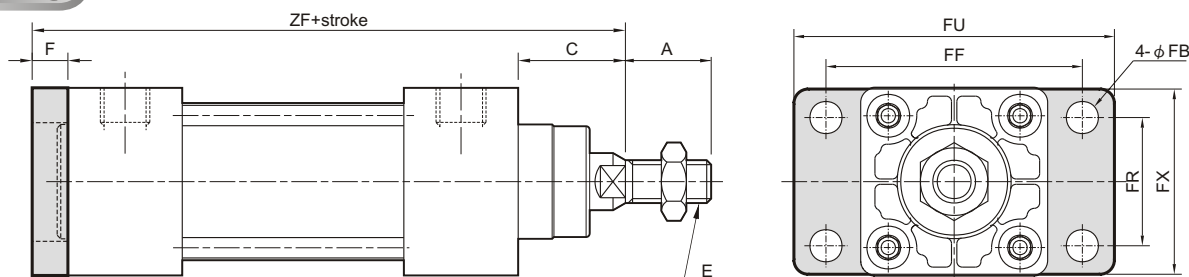
Code Tube I.D.	A	E	LB	LH	LL	LM	LR	LS	LT	LX	LY	ZT
32	22	M10×1.25	7	32	24	8	32	47	5	55.5	142	144
40	24	M12×1.25	9	36	28	10	36	53	5	62.2	161	163
50	32	M16×1.5	9	45	32	10	45	65	5	77.5	170	175
63	32	M16×1.5	9	50	32	10	50	75	5	87.5	185	190
80	40	M20×1.5	12	63	41	13	63	95	6	110.5	210	215
100	40	M20×1.5	14	71	41	13	75	115	6	128.5	220	230

FAC



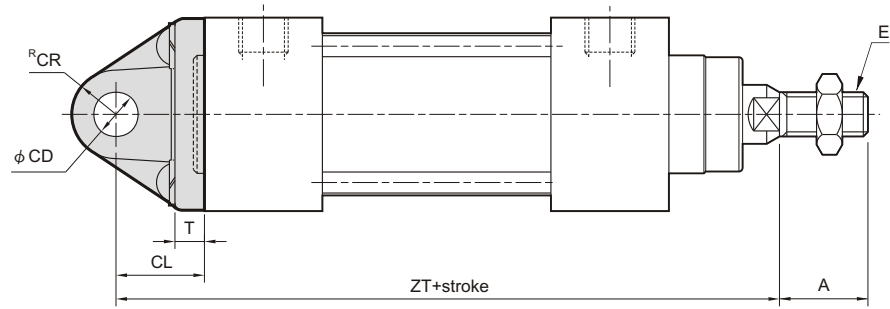
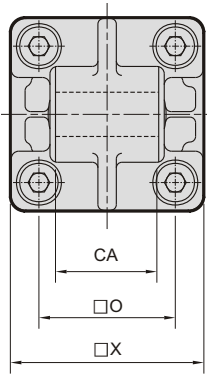
Code Tube I.D.	A	E	F	FB	FD	FF	FR	FU	FX	ZF
32	22	M10×1.25	10	7	16	64	32	79	50	108
40	24	M12×1.25	10	9	20	72	36	90	52	120
50	32	M16×1.5	12	9	25	90	45	110	65	123
63	32	M16×1.5	12	9	25	100	50	125	76	137
80	40	M20×1.5	16	12	30	126	63	154	94	148
100	40	M20×1.5	16	14	35	150	75	180	112	158

FBC



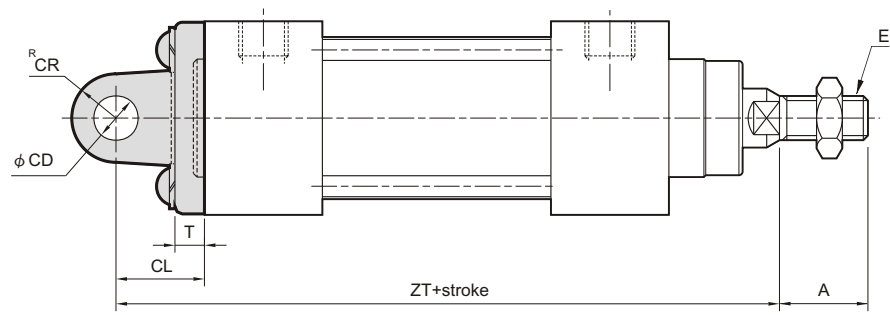
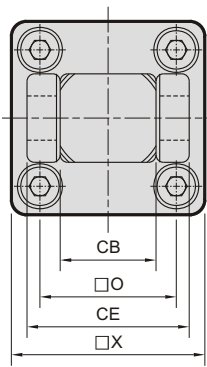
Code Tube I.D.	A	C	E	F	FB	FF	FR	FU	FX	ZF
32	22	26	M10×1.25	10	7	64	32	79	50	130
40	24	30	M12×1.25	10	9	72	36	90	52	145
50	32	37	M16×1.5	12	9	90	45	110	65	155
63	32	37	M16×1.5	12	9	100	50	125	76	170
80	40	46	M20×1.5	16	12	126	63	154	94	190
100	40	51	M20×1.5	16	14	150	75	180	112	205

CA



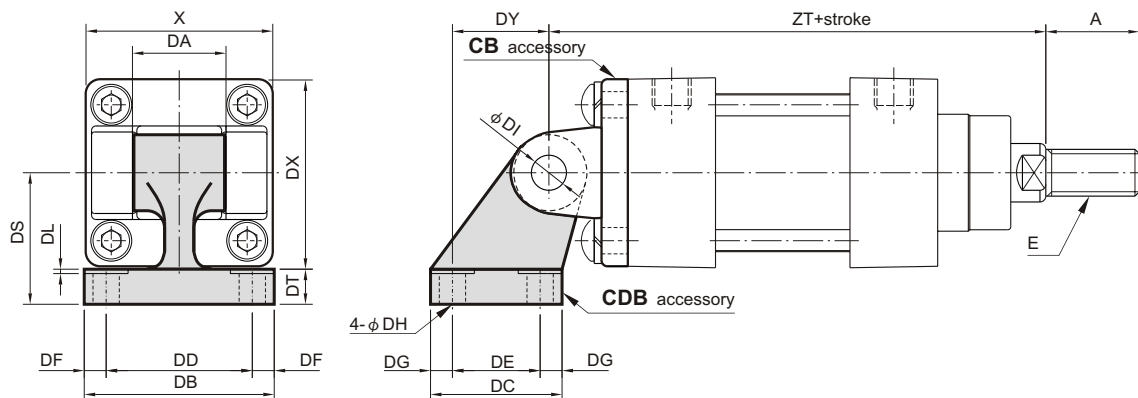
Code Tube I.D.	A	CA	CD	CL	CR	E	O	T	X	ZT
32	22	$26_{-0.3}^{-0.1}$	10^{H9}	22	10.5	M10×1.25	32.5	10	47	142
40	24	$28_{-0.3}^{-0.1}$	12^{H9}	25	12	M12×1.25	38	9	53	160
50	32	$32_{-0.3}^{-0.1}$	12^{H9}	27	12	M16×1.5	46.5	9	65	170
63	32	$40_{-0.3}^{-0.1}$	16^{H9}	32	18	M16×1.5	56.5	9	75	190
80	40	$50_{-0.3}^{-0.1}$	16^{H9}	36	17	M20×1.5	72	12	95	210
100	40	$60_{-0.3}^{-0.1}$	20^{H9}	41	21	M20×1.5	89	12	112	230

CB



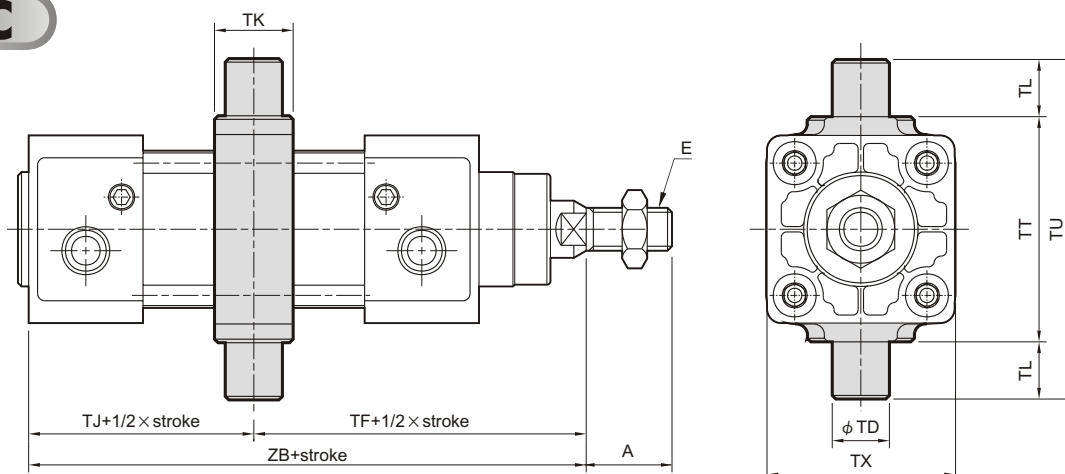
Code Tube I.D.	A	CB	CD	CE	CL	CR	E	O	T	X	ZT
32	22	$26_{+0.1}^{+0.3}$	10^{H9}	45	22	10.5	M10×1.25	32.5	10	47	142
40	24	$28_{+0.1}^{+0.3}$	12^{H9}	52	25	12	M12×1.25	38	9	53	160
50	32	$32_{+0.1}^{+0.3}$	12^{H9}	60	27	12	M16×1.5	46.5	9	65	170
63	32	$40_{+0.1}^{+0.3}$	16^{H9}	70	32	18	M16×1.5	56.5	9	75	190
80	40	$50_{+0.1}^{+0.3}$	16^{H9}	90	36	17	M20×1.5	72	12	95	210
100	40	$60_{+0.1}^{+0.3}$	20^{H9}	110	41	21	M20×1.5	89	12	112	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	53	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	75	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



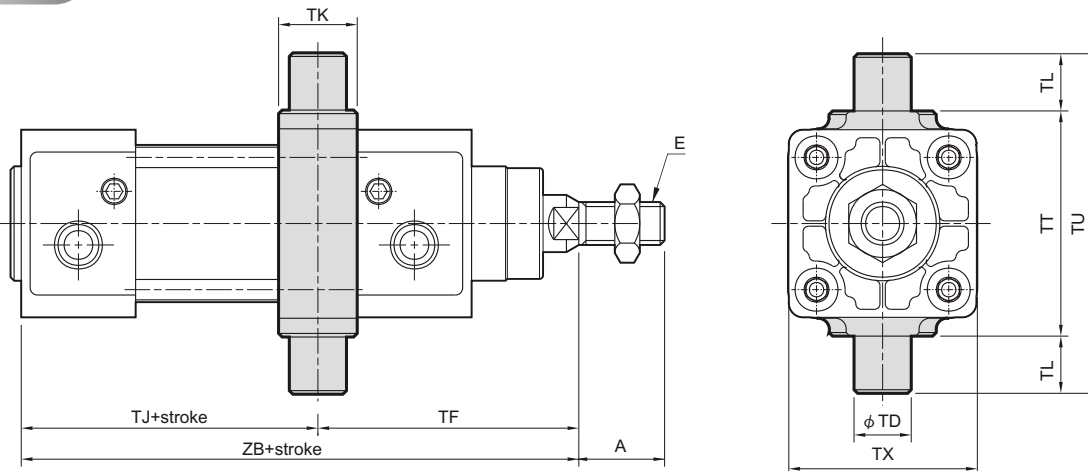
Code Tube I.D.	A	E	TD	TF	TJ	TK	TL	TT	TU	TX	ZB
32	22	M10×1.25	12 ^{øB}	73	47	22	12	50	74	47	120
40	24	M12×1.25	16 ^{øB}	82.5	52.5	22	16	63	95	53	135
50	32	M16×1.5	16 ^{øB}	90	53	22	16	75	107	66	143
63	32	M16×1.5	20 ^{øB}	97.5	60.5	28	20	90	130	78	158
80	40	M20×1.5	20 ^{øB}	110	64	34	20	110	150	95	174
100	40	M20×1.5	25 ^{øB}	120	69	40	25	132	182	114	189

MCQV Mounting accessories $\phi 32\sim\phi 100$

ISO-VDMA STANDARD CYLINDERS

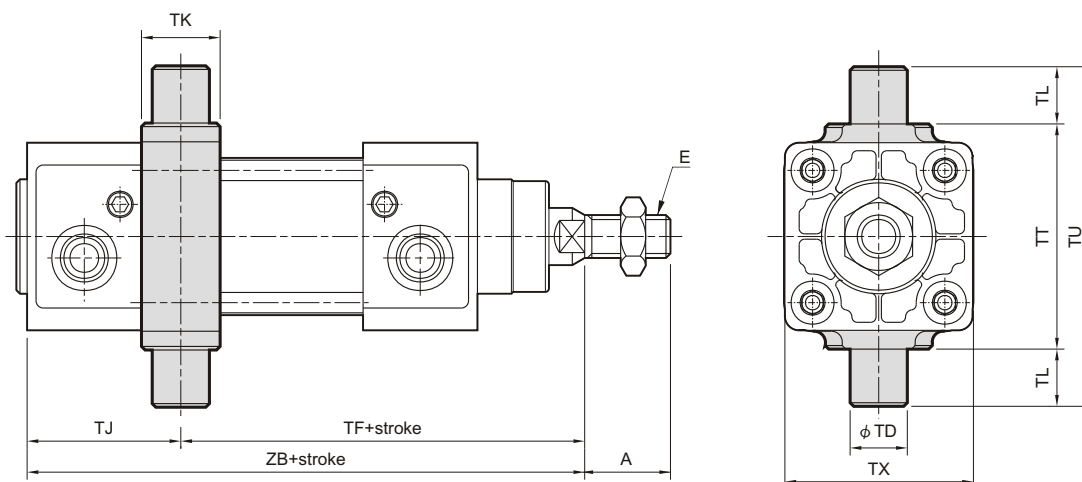


TA



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 ^{SB}	64	56	120	86	150	22	12	50	74	47
40	24	M12×1.25	16 ^{SB}	72	63	135	93	165	22	16	63	95	53
50	32	M16×1.5	16 ^{SB}	79	64	143	94	173	22	16	75	107	66
63	32	M16×1.5	20 ^{SB}	84	74	158	104	188	28	20	90	130	78
80	40	M20×1.5	20 ^{SB}	102	72	174	112	214	34	20	110	150	95
100	40	M20×1.5	25 ^{SB}	112	77	189	117	229	40	25	132	182	114

TB



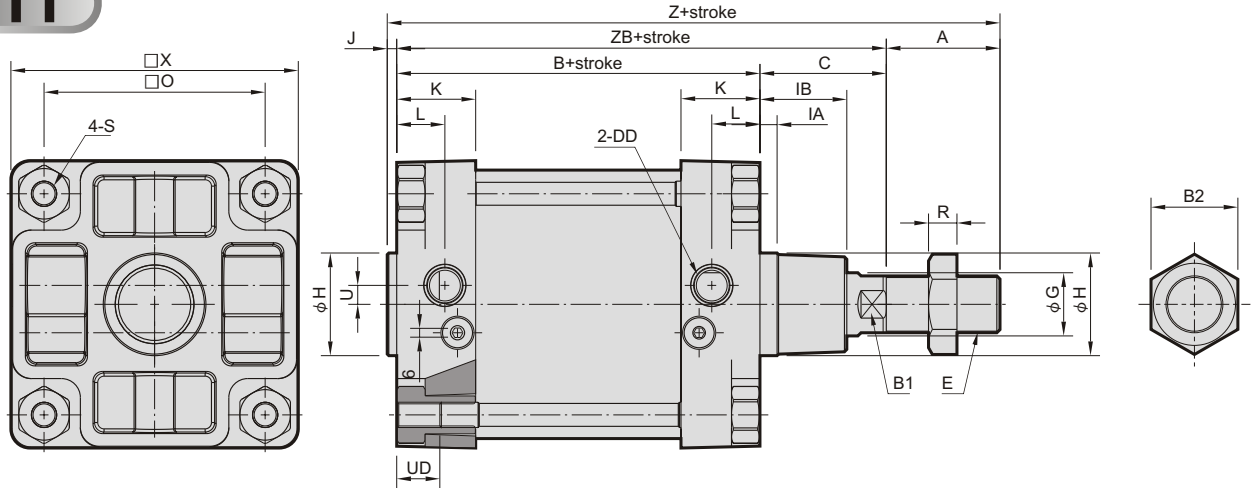
Code Tube I.D.	A	E	TD	without magnet		magnet		TJ	TK	TL	TT	TU	TX
				TF	ZB	TF	ZB						
32	22	M10×1.25	12 ^{SB}	82	120	112	150	38	22	12	50	74	47
40	24	M12×1.25	16 ^{SB}	93	135	123	165	42	22	16	63	95	53
50	32	M16×1.5	16 ^{SB}	101	143	131	173	42	22	16	75	107	66
63	32	M16×1.5	20 ^{SB}	111	158	141	188	42	28	20	90	130	78
80	40	M20×1.5	20 ^{SB}	118	174	158	214	56	34	20	110	150	95
100	40	M20×1.5	25 ^{SB}	128	189	168	229	61	40	25	132	182	114

MCQV Dimensions $\phi 125, \phi 160$

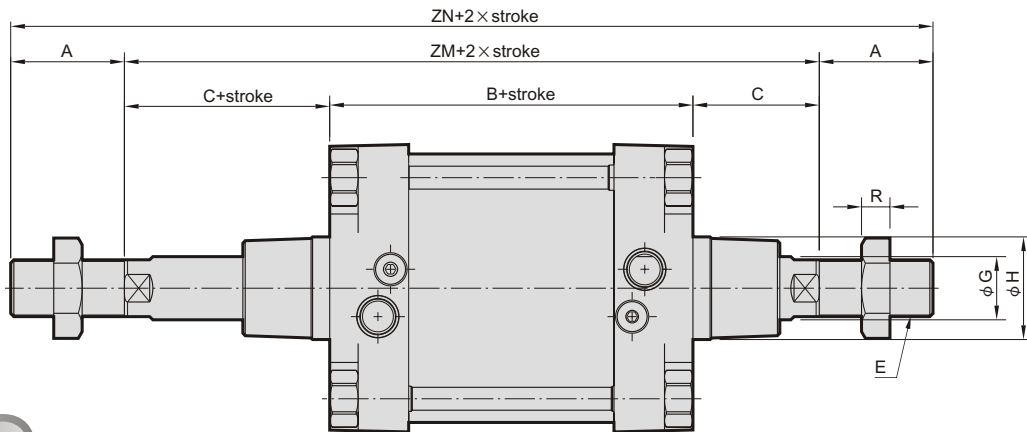
ISO-VDMA STANDARD CYLINDERS



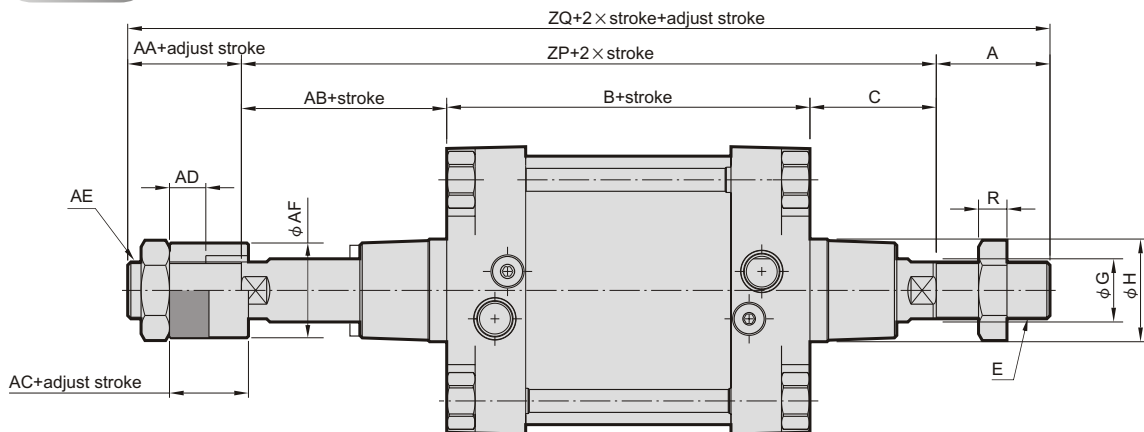
11



21



27



Code Tube I.D.	A	AA	AB	AE	AC	AD	AF	B	B1	B2	C	DD	E	G	H	IA	IB	J	K	L	O	R	S
125	54	38	55	M30×1.5	30	18	60	160	27	41	65	G 1/2	M27×P2.0	32	60 ^{±11}	10	40	6	40	25	110	13.5	M12×1.75
160	72	38	71	M30×1.5	30	18	60	180	36	55	80	G 3/4	M36×P2.0	40	65 ^{±11}	10	55	6	50	30.5	140	18	M16×2.0

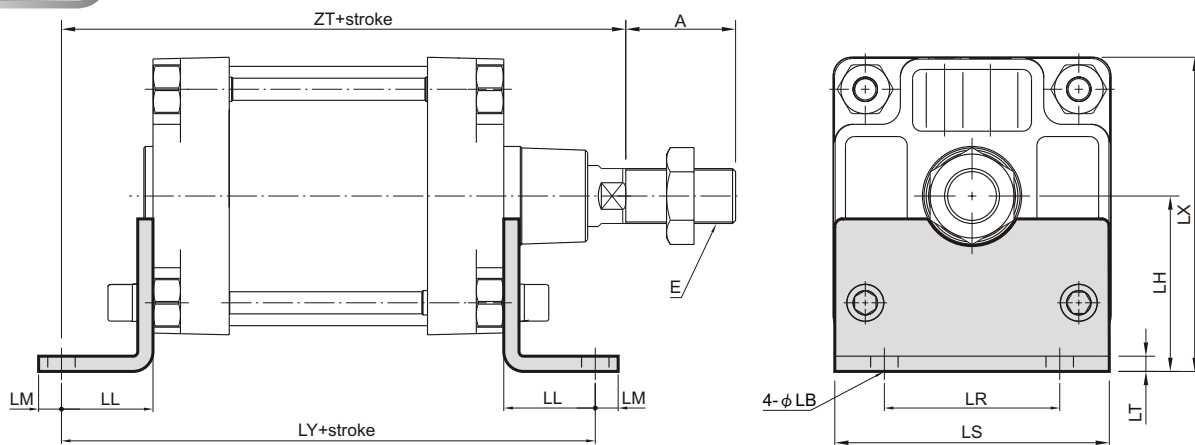
Code Tube I.D.	U	UD	X	Z	ZB	ZM	ZN	ZQ	ZP
125	11	22	140	285	225	290	398	372	280
160	12	27	182	338	260	340	484	441	331

MCQV Mounting accessories $\phi 125, \phi 160$

ISO-VDMA STANDARD CYLINDERS

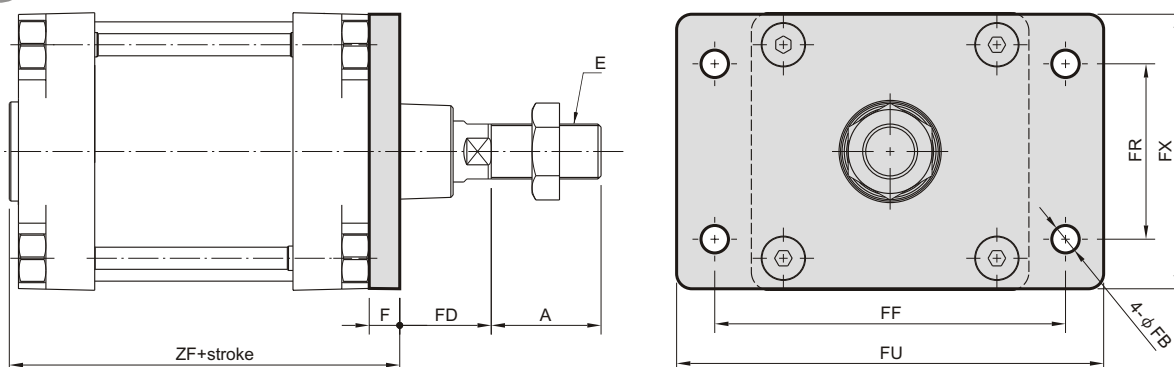


LB



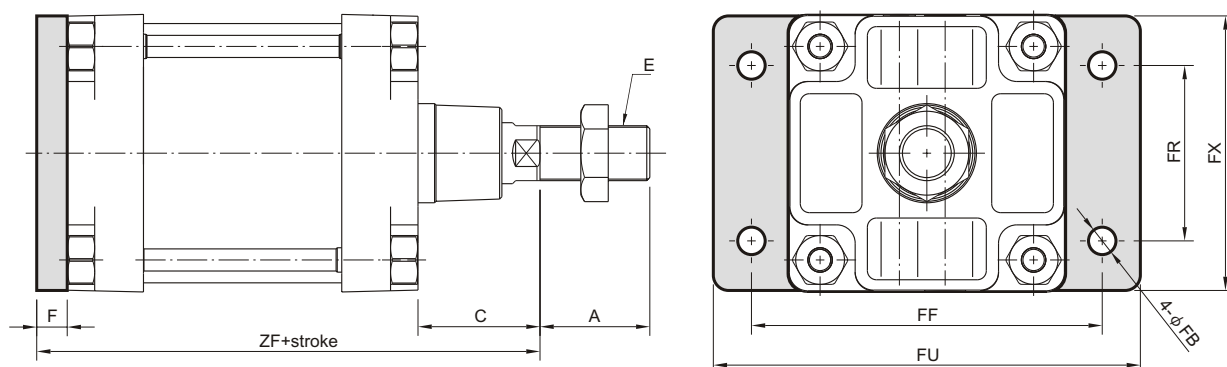
Code Tube I.D.	A	E	LB	LH	LL	LM	LR	LS	LT	LX	LY	ZT
125	54	M27×2.0	16	90	45	25	90	140	9	160	250	270
160	72	M36×2.0	18	115	60	15	115	180	10	206	300	320

FAC



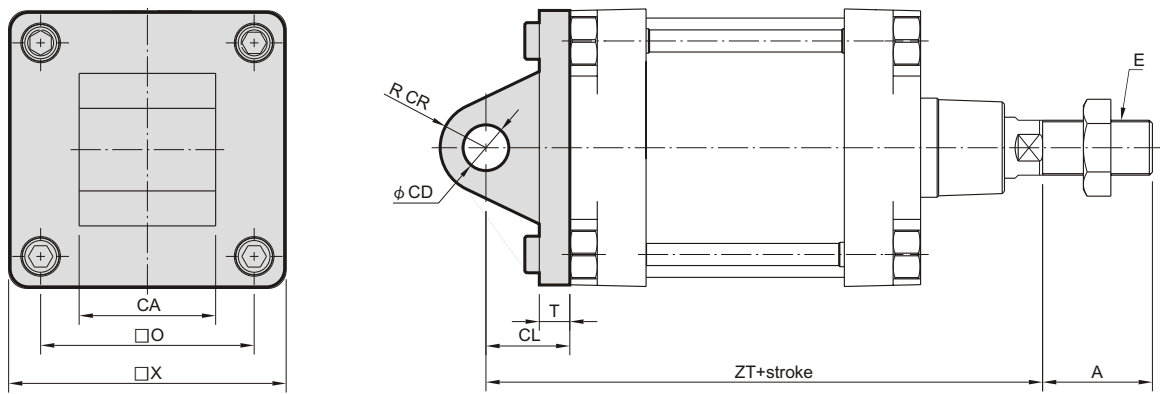
Code Tube I.D.	A	E	F	FB	FD	FF	FR	FU	FX	ZF
125	54	M27×2.0	20	16	45	180	90	210	140	186
160	72	M36×2.0	20	18	60	230	115	280	180	206

FBC



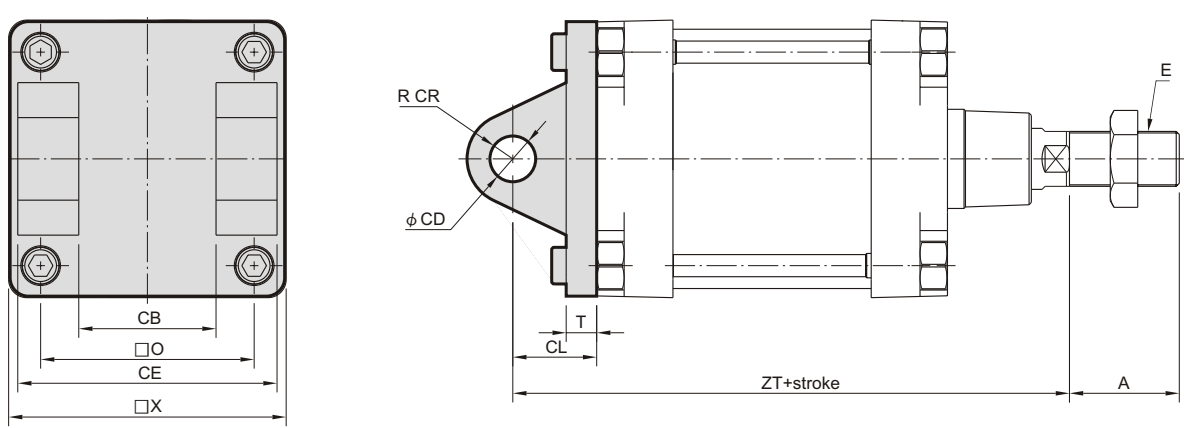
Code Tube I.D.	A	C	E	F	FB	FF	FR	FU	FX	ZF
125	54	65	M27×2.0	20	16	180	90	210	140	245
160	72	80	M36×2.0	20	18	230	115	280	180	280

CA



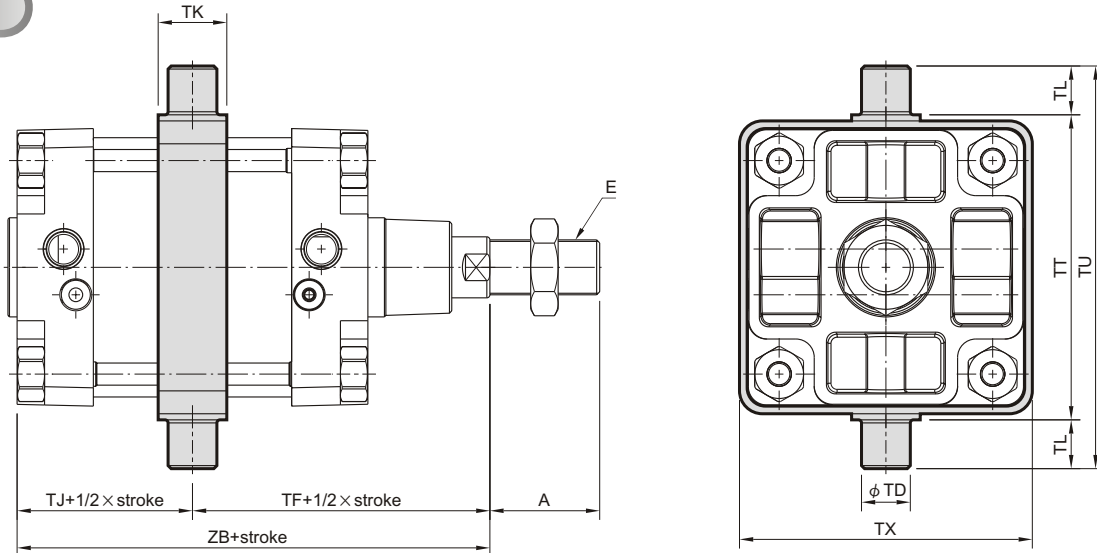
Code Tube I.D.	A	CA	CD	CL	CR	E	O	T	X	ZT
125	54	$70_{-0.3}^{-0.1}$	25^{H9}	50	25	M27 x 2.0	110	20	140	275
160	72	$90_{-1.2}^{-0.5}$	30^{H9}	55	30	M36 x 2.0	140	20	180	315

CB



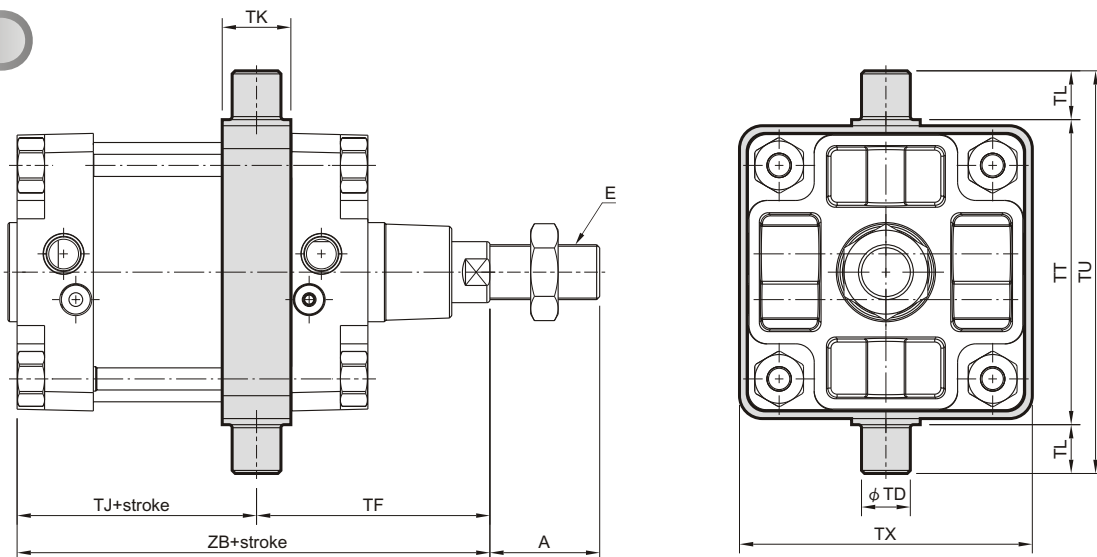
Code Tube I.D.	A	CB	CD	CE	CL	CR	E	O	T	X	ZT
125	54	70^{H14}	25^{H9}	$130_{-1.0}^{+0}$	50	25	M27 x 2.0	110	20	140	275
160	72	90^{H14}	30^{H9}	$170_{-0.7}^{+0}$	55	30	M36 x 2.0	140	20	180	315

TC



Code Tube I.D.	A	E	TD	TF	TJ	TK	TL	TT	TU	TX	ZB
125	54	M27 × 2.0	25 ^{ø9}	145	80	40	25	160	210	155	225
160	72	M36 × 2.0	32 ^{ø9}	170	90	45	32	200	264	192	260

TA



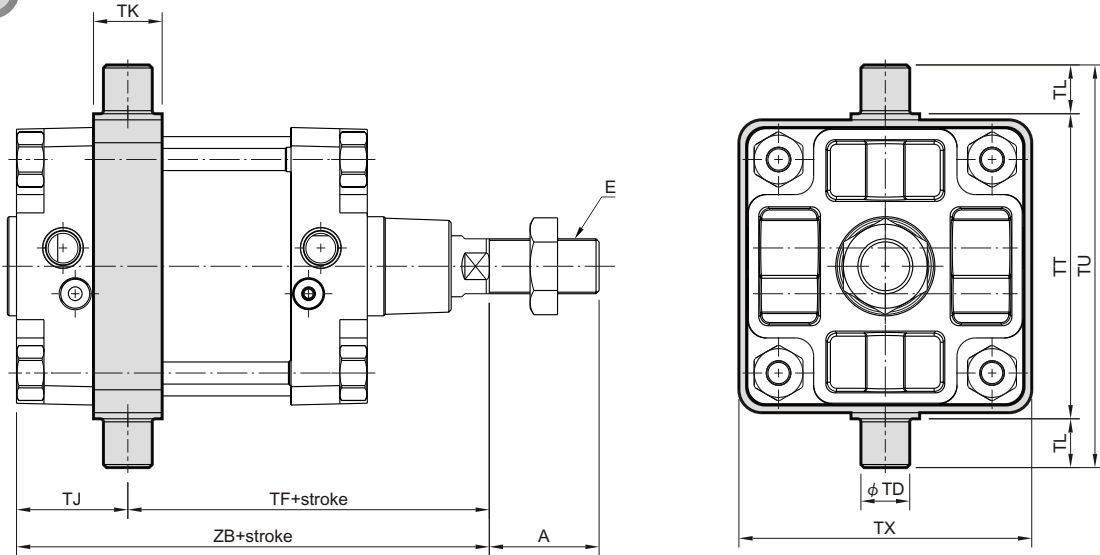
Code Tube I.D.	A	E	TD	TF	TJ	TK	TL	TT	TX	TU	ZB
125	54	M27 × 2.0	25 ^{ø9}	125	100	40	25	160	155	210	225
160	72	M36 × 2.0	32 ^{ø9}	153	107	45	32	200	192	264	260

MCQV Mounting accessories $\phi 125, \phi 160$

ISO-VDMA STANDARD CYLINDERS



TB

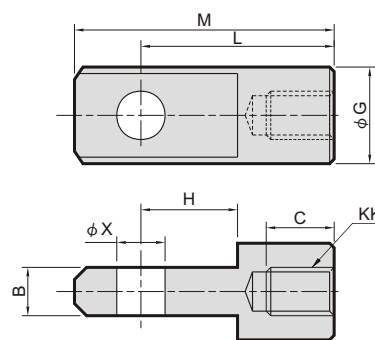
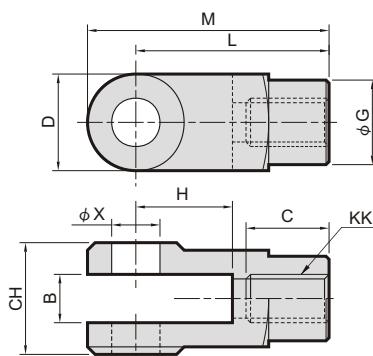
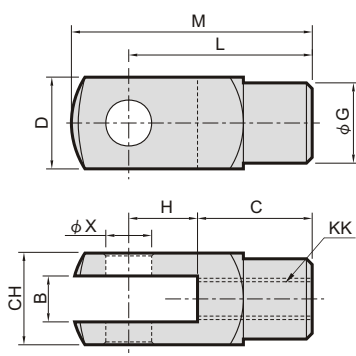


Code Tube I.D.	A	E	TD	TF	TJ	TK	TL	TT	TU	TX	ZB
125	54	M27 × 2.0	25 ^{ø9}	165	60	40	25	160	210	155	225
160	72	M36 × 2.0	32 ^{ø9}	187	73	45	32	200	264	192	260

Y connector

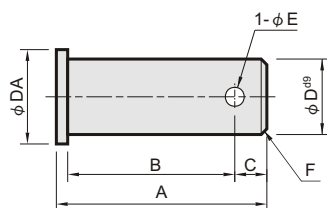
$\phi 32, \phi 40$

$\phi 50 \sim \phi 100$



Code Tube I.D.	B		C		CH		D		G		H		L		KK		M		X ^{H9}
	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	
32	10 ^{+0.5} _{+0.15}	10 ^{-0.1} _{-0.2}	20	17	19	/	19	/	$\phi 18$	$\phi 20$	20	15	40	40	M10 × 1.25	52	52	$\phi 10$ ^{+0.04} ₀	
40	12 ^{+0.5} _{+0.15}	12 ^{-0.1} _{-0.2}	24	21	24	/	24	/	$\phi 20$	$\phi 24$	24	18	48	48	M12 × 1.25	62	62	$\phi 12$ ^{+0.04} ₀	
50	16 ^{+0.3} _{+0.1}	16 ^{-0.1} _{-0.3}	28	23	32	/	32	/	$\phi 28$	$\phi 32$	32	32	64	64	M16 × 1.5	89	86	$\phi 16$ ^{+0.04} ₀	
63	16 ^{+0.3} _{+0.1}	16 ^{-0.1} _{-0.3}	28	23	32	/	32	/	$\phi 28$	$\phi 32$	32	32	64	64	M16 × 1.5	89	86	$\phi 16$ ^{+0.04} ₀	
80	20 ^{+0.3} _{+0.1}	20 ^{-0.1} _{-0.3}	33	30	45	/	40	/	$\phi 36$	$\phi 36$	40	40	80	80	M20 × 1.5	100	108	$\phi 20$ ^{+0.05} ₀	
100	20 ^{+0.3} _{+0.1}	20 ^{-0.1} _{-0.3}	33	30	45	/	40	/	$\phi 36$	$\phi 36$	40	40	80	80	M20 × 1.5	100	108	$\phi 20$ ^{+0.05} ₀	

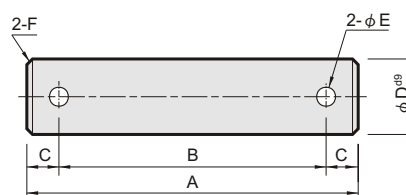
Pin for Y.I connector



for Y.I connector

Code Tube I.D.	A	B	C	D ^{d9}	DA	E	F	Split pin
32	30	25	3.5	$\phi 10$ ^{-0.06} _{-0.09}	14	3.2	1	3.2 × 20L
40	37	30	5	$\phi 12$ ^{-0.06} _{-0.09}	16	3.2	1	3.2 × 20L
50 63	47	37	7	$\phi 16$ ^{-0.05} _{-0.09}	22	4	1	4 × 25L
80 100	62	50	8	$\phi 20$ ^{-0.06} _{-0.11}	30	5	1.5	5 × 35L

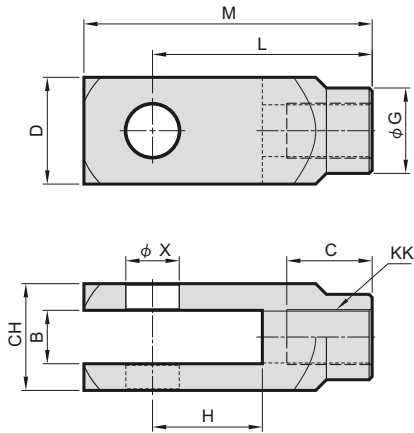
Pin for CA.CB



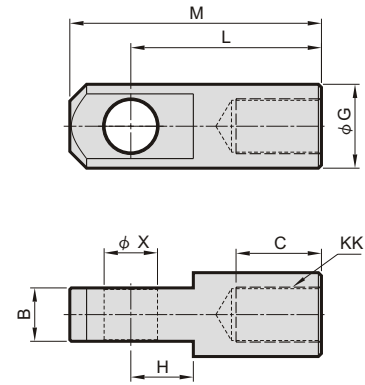
for CA.CB

Code Tube I.D.	A	B	C	D ^{d9}	E	F	Split pin
32	69	55	7	$\phi 10$ ^{-0.05} _{-0.09}	4	1.0	4 × 20L
40	76	62	7	$\phi 12$ ^{-0.05} _{-0.09}	4	1.0	4 × 20L
50	84	70	7	$\phi 12$ ^{-0.05} _{-0.09}	4	1.0	4 × 20L
63	94	80	7	$\phi 16$ ^{-0.05} _{-0.09}	4	1.0	4 × 30L
80	117	100	8.5	$\phi 16$ ^{-0.05} _{-0.09}	5	1.5	5 × 30L
100	137	120	8.5	$\phi 20$ ^{-0.05} _{-0.09}	5	1.5	5 × 35L

Y connector

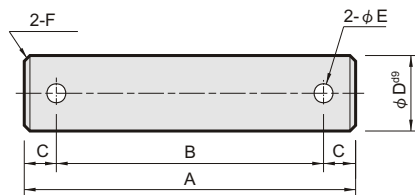


I connector



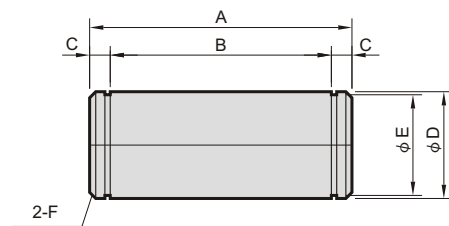
Code Tube I.D.	B		C		CH		D		G		H		KK		L		M		X ^{F7}	
	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I
125	30 ^{+0.52} ₀	30 ^{-0.2} _{-0.3}	56	51	55	/	55	/	48	55	54	40	M27×2.0	110	110	148	145	30 ^{+0.52} ₀	30 ^{+0.04} _{+0.02}	
160	35 ^{+0.62} ₀	35 ^{-0.2} _{-0.3}	56	56	70	/	70	/	56	55	72	41	M36×2.0	144	125	189	165	35 ^{+0.05} _{+0.02}	35 ^{+0.05} _{+0.02}	

Pin $\phi 125$



Code Tube I.D.	A	B	C	D ^{H9}	E	F	Split pin
CB	157	140	8.5	$\phi 25$ ^{-0.07} _{-0.12}	5	1.5	5×36L
Y	81	64	8.5	$\phi 30$ ^{-0.07} _{-0.12}	6.3	1.5	6.3×40L

Pin $\phi 160$



Code Tube I.D.	A	B	C	D	E	F	Snap ring
CB	186	172	7	30 ⁶⁸ ^{-0.05} _{-0.09}	28.6 ⁰ _{-0.21}	2	STW—30
Y	86	72	7	35 ¹⁷ ⁻⁰ _{-0.03}	33 ⁰ _{-0.25}	2	STW—35