



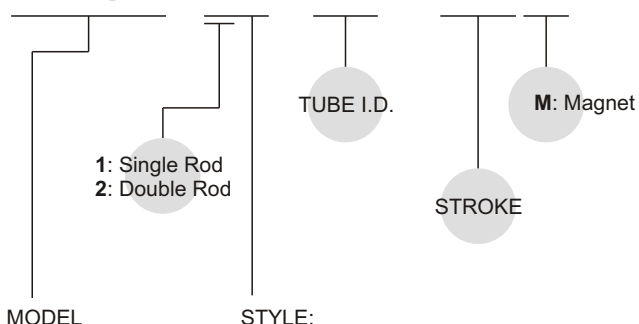
Table for standard stroke:

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:

MCQV2 – 11 – 40 – 100 M



Model	Tube I.D.	Code		Symbol	Description
MCQV2	φ 32~φ 100	1	1		Double acting / Male thread
MCQV	φ 125, φ 160	2	1		Double rod / 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 H-03.

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.

■ Cylinder mountings:

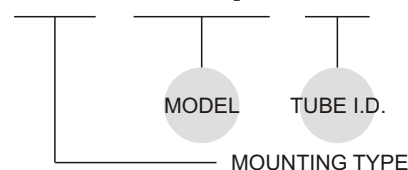
Available with comprehensive internationally recognised range of fixed and flexible mountings.

Specification:

Model	MCQV2			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



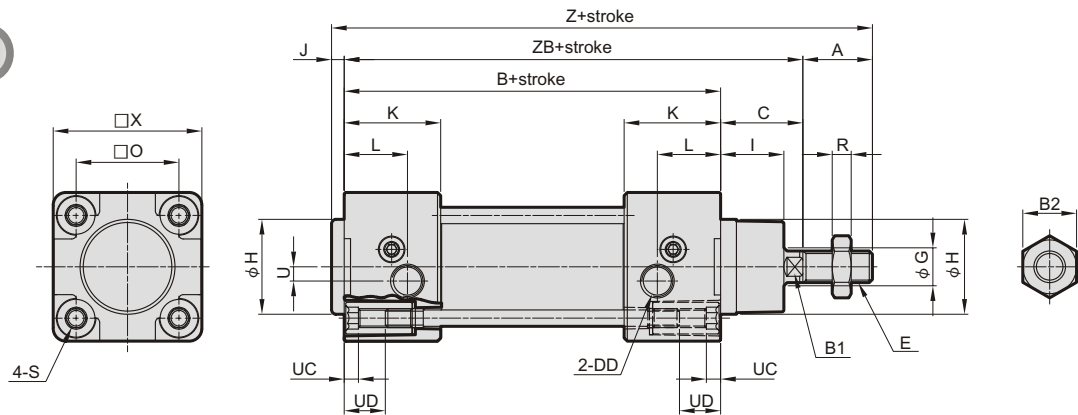
	LB
	CA
	CB
	CDB (+CB+Pin)
	FAC
	FBC
	TA
	TB
	TC
	Y
	I

MCQV2 Dimensions $\phi 32 \sim \phi 100$

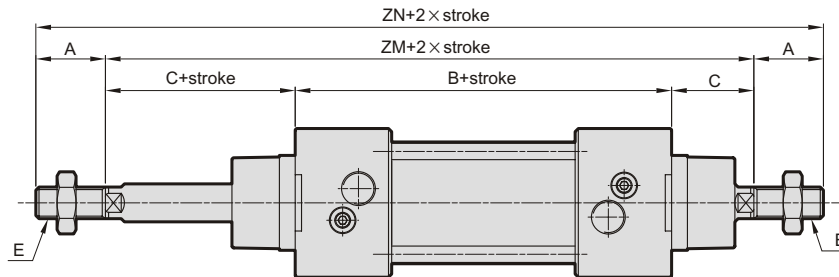
ISO-VDMA STANDARD CYLINDERS



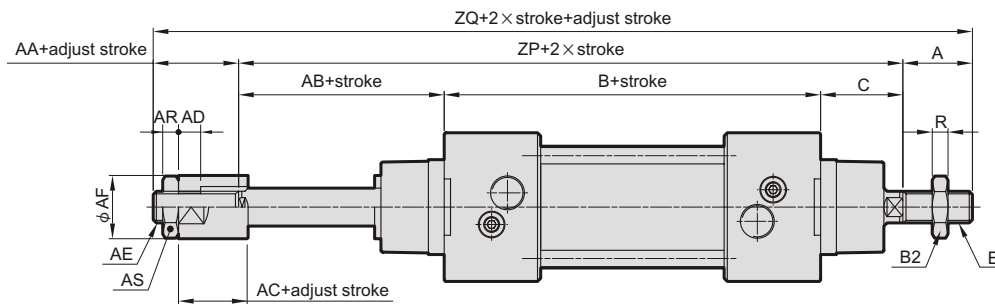
11



21



27

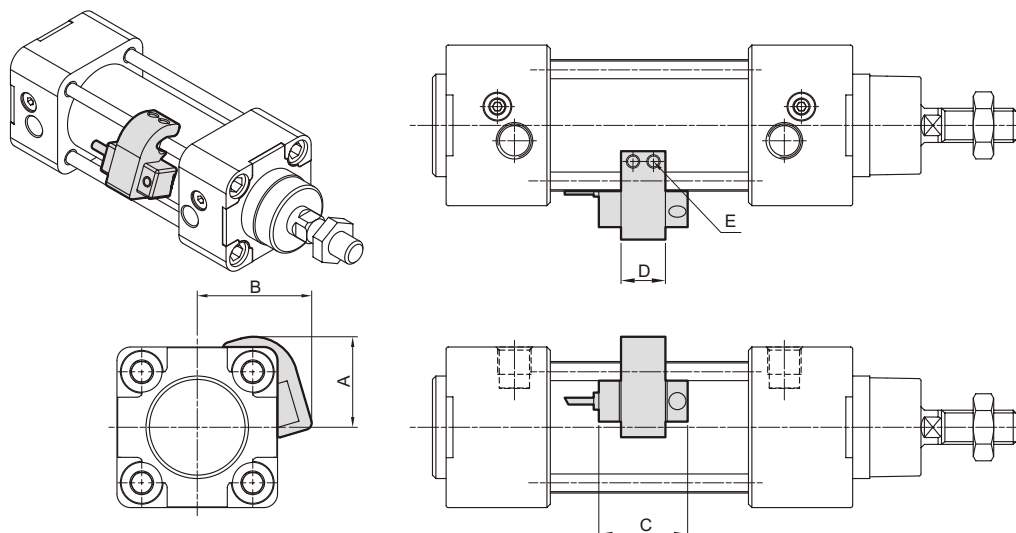


Code Tube I.D.	A	AA	AB	AC	AD	AE	AF	AR	AS	B	B1	B2	C	DD	E	G	H	I	J	K	L	O	R
32	22	16	26	12	7	M10×1.25	20	5	17	94	10	17	26	G 1/8	M10×1.25	12	30	20	4	30.5	20	32.5	5
40	24	20	27	12	7	M12×1.25	30	6	19	105	13	19	30	G 1/4	M12×1.25	16	35	20.5	4	34	14.5	38	6
50	32	18	34	15	10	M16×1.5	40	8	24	106	16	24	37	G 1/4	M16×1.5	20	40	28	4	31	16	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	26	4	33	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	32.5	4	35.5	20.5	72	10
100	40	30	46	20	14	M22×1.5	50	13	32	138	21	30	51	G 1/2	M20×1.5	25	55	37.5	4	37	19	89	10

Code Tube I.D.	S	U	UC	UD	X	Z	ZB	ZM	ZN	ZP	ZQ
32	M6×1.0	4.5	4.5	12	47	146	120	146	190	146	184
40	M6×1.0	5.3	4.5	12	55	163	135	165	213	162	206
50	M8×1.25	8.5	4.5	16	65	179	143	180	244	177	227
63	M8×1.25	8	4.5	16	78	194	158	195	259	190	242
80	M10×1.5	9	4.5	18	95	218	174	220	300	215	287
100	M10×1.5	13	4.5	18	115	233	189	240	320	235	305

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

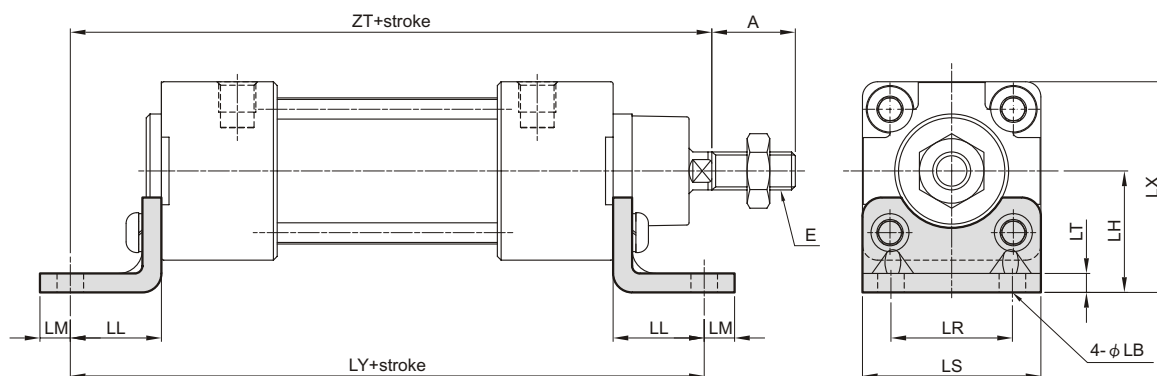
ISO-VDMA STANDARD CYLINDERS



Code Tube I.D.	Sensor switch	Hold	A	B	C	D	E
MCQV2-32	RCA	HV1	26.5	33.5	26	13	M4 × 10L
MCQV2-40	RCA	HV1	29.5	36.5	26	13	M4 × 10L
MCQV2-50	RCA	HV2	37.5	41.5	26	13	M4 × 10L
MCQV2-63	RCA	HV2	42.5	46.5	26	13	M4 × 10L
MCQV2-80	RCA	HV3	49.5	54.5	26	13	M5 × 16L
MCQV2-100	RCA	HV3	57.5	62.5	26	13	M5 × 16L
MCQV-125	RCA	HV4	—	—	26	13	M4 × 10L
MCQV-160	RCA	PM16	—	—	26	12	M4 × 10L

■ Mounting accessories

LB



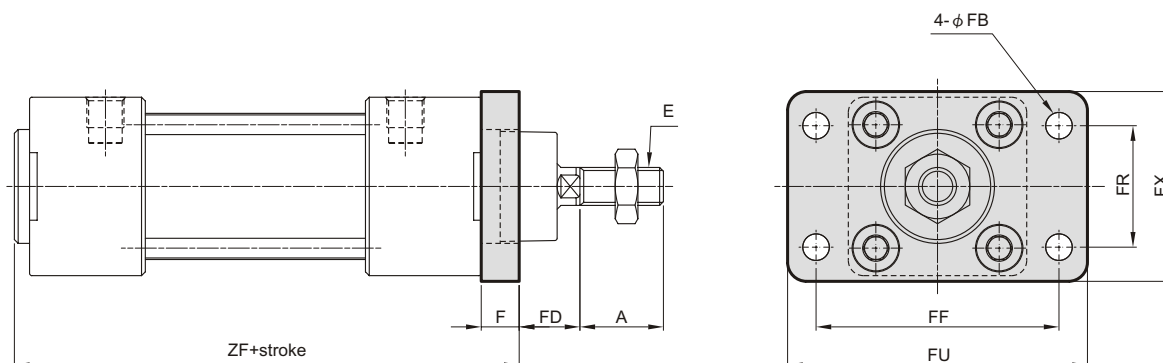
Code Tube I.D.	A	E	LB	LH	LL	LM	LR	LS	LT	LX	LY	ZT
32	22	M10 × 1.25	7	32	24	8	32	47	5	55.5	142	144
40	24	M12 × 1.25	9	36	28	10	36	53	5	63.2	161	163
50	32	M16 × 1.5	9	45	32	10	45	65	5	77.5	170	175
63	32	M16 × 1.5	9	50	32	10	50	75	5	89	185	190
80	40	M20 × 1.5	12	63	41	13	63	95	6	110.5	210	215
100	40	M20 × 1.5	14	71	41	13	75	115	6	128.5	220	230

MCQV2 Mounting accessories $\phi 32 \sim \phi 100$

ISO-VDMA STANDARD CYLINDERS

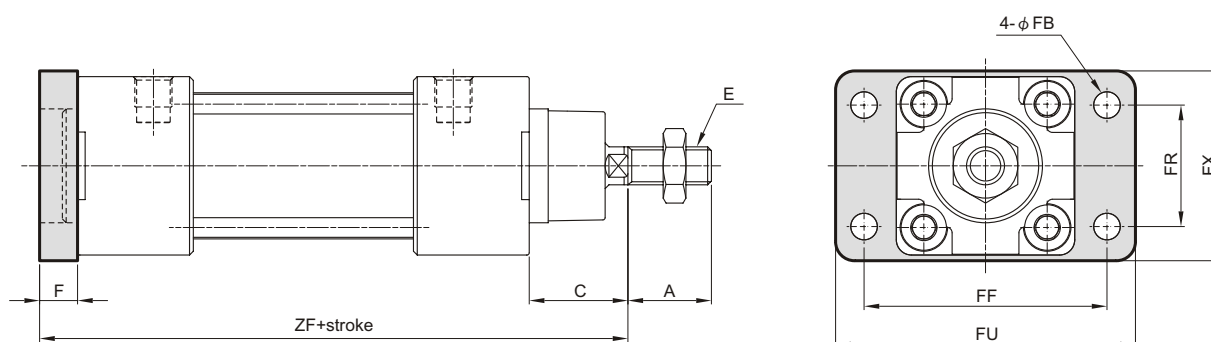


FAC



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	93	54	120
50	32	M16×1.5	12	9	25	90	45	112	67	123
63	32	M16×1.5	12	9	25	100	50	127	79	137
80	40	M20×1.5	16	12	30	126	63	158	98	148
100	40	M20×1.5	16	14	35	150	75	185	116	158

FBC



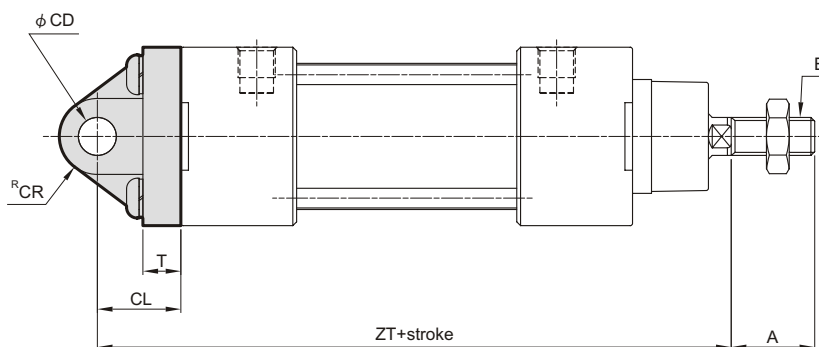
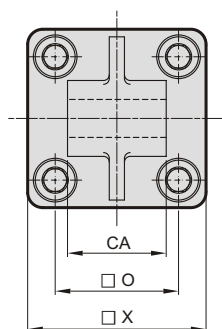
Code Tube I.D.	A	C	E	F	FB	FF	FR	FU	FX	ZF
32	22	26	M10×1.25	10	7	64	32	79	50	130
40	24	30	M12×1.25	10	9	72	36	93	54	145
50	32	37	M16×1.5	12	9	90	45	112	67	155
63	32	37	M16×1.5	12	9	100	50	127	79	170
80	40	46	M20×1.5	16	12	126	63	158	98	190
100	40	51	M20×1.5	16	14	150	75	185	116	205

MCQV2 Mounting accessories $\phi 32 \sim \phi 100$

ISO-VDMA STANDARD CYLINDERS

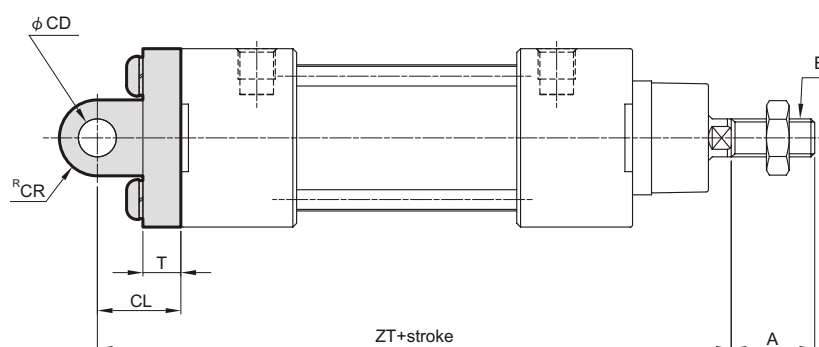
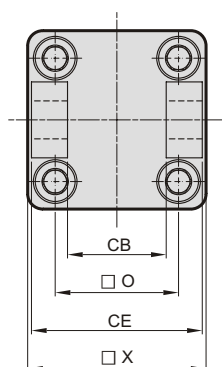


CA



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	14	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	11	112	230

CB



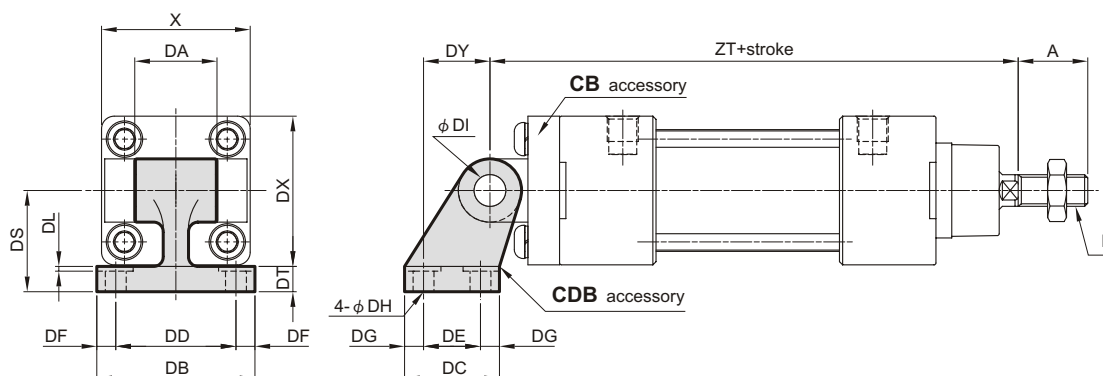
Code Tube I.D.	A	CB	CD	CE	CL	CR	E	O	T	X	ZT
32	22	$26_{+0.1}^{+0.3}$	10^{H9}	45	22	10.5	M10×1.25	32.5	10	47	142
40	24	$28_{+0.1}^{+0.3}$	12^{H9}	52	25	12	M12×1.25	38	9	53	160
50	32	$32_{+0.1}^{+0.3}$	12^{H9}	60	27	14	M16×1.5	46.5	9	65	170
63	32	$40_{+0.1}^{+0.3}$	16^{H9}	70	32	18	M16×1.5	56.5	9	75	190
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	11	115	230

MCQV2 Mounting accessories $\phi 32 \sim \phi 100$

ISO-VDMA STANDARD CYLINDERS

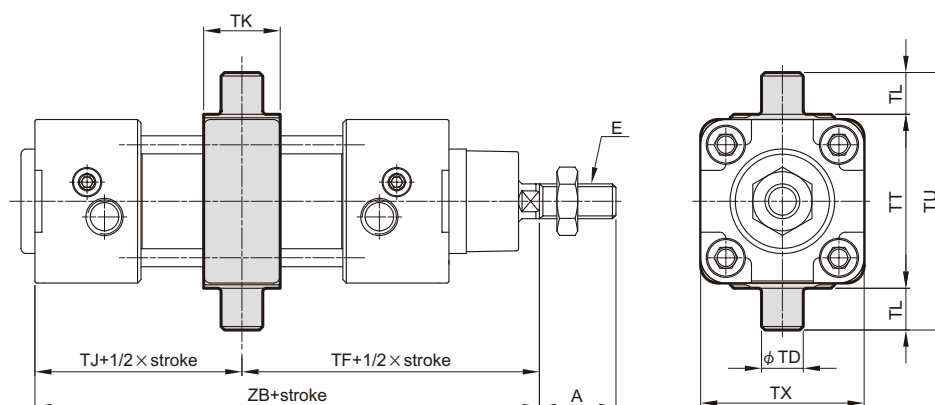


CDB CB+Pin (Extra purchase)



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



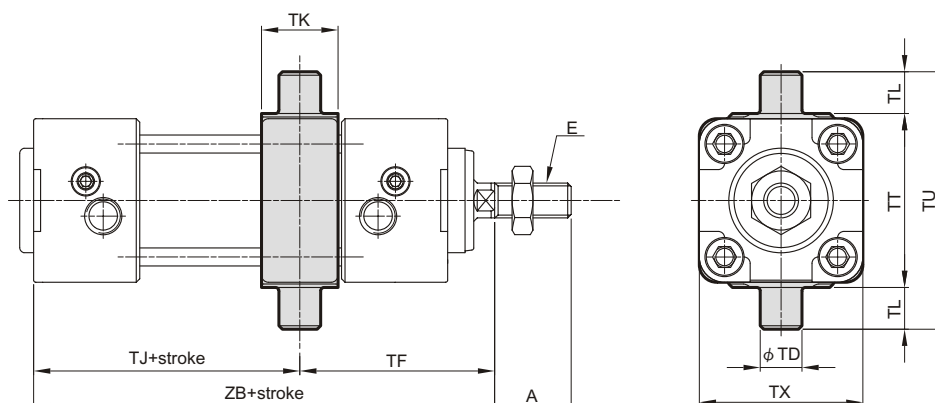
Code Tube I.D.	A	E	TD	TF	TJ	TK	TL	TT	TU	TX	ZB
32	22	M10×1.25	12 ^{øB}	73	47	22	12	50	74	47	120
40	24	M12×1.25	16 ^{øB}	82.5	52.5	22	16	63	95	53	135
50	32	M16×1.5	16 ^{øB}	90	53	22	16	75	107	66	143
63	32	M16×1.5	20 ^{øB}	97.5	60.5	28	20	90	130	80	158
80	40	M20×1.5	20 ^{øB}	110	64	34	20	110	150	106	174
100	40	M20×1.5	25 ^{øB}	120	69	40	25	132	182	126	189

MCQV2 Mounting accessories $\phi 32 \sim \phi 100$

ISO-VDMA STANDARD CYLINDERS

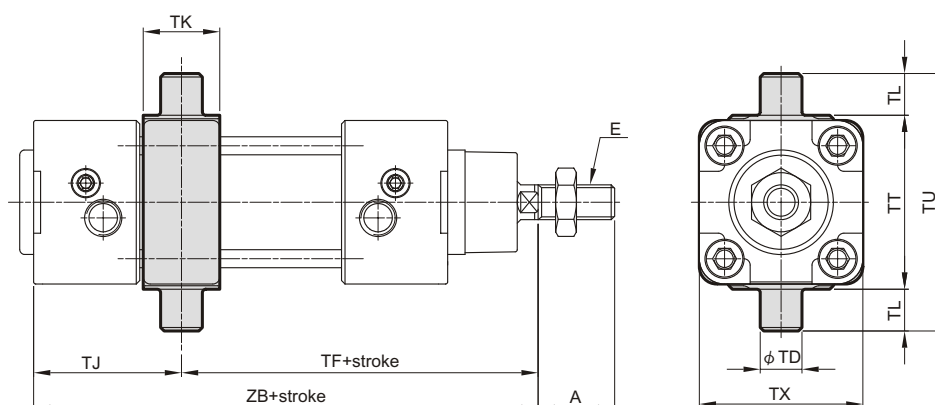


TA



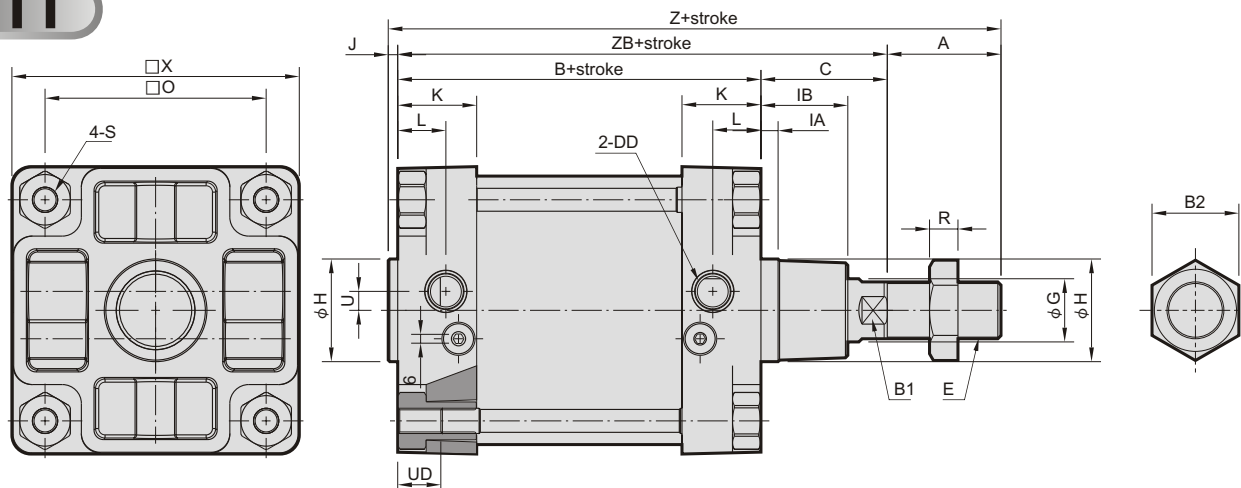
Code Tube I.D.	A	E	TD	TF	without magnet		magnet		TK	TL	TT	TU	TX
					TJ	ZB	TJ	ZB					
32	22	M10×1.25	12 ^{es}	68.5	51.5	120	81.5	150	22	12	50	74	47
40	24	M12×1.25	16 ^{es}	76	59	135	89	165	22	16	63	95	53
50	32	M16×1.5	16 ^{es}	80	63	143	93	173	22	16	75	107	66
63	32	M16×1.5	20 ^{es}	85	73	158	103	188	28	20	90	130	80
80	40	M20×1.5	20 ^{es}	99.5	74.5	174	114.5	214	34	20	110	150	106
100	40	M20×1.5	25 ^{es}	109	80	189	120	229	40	25	132	182	126

TB

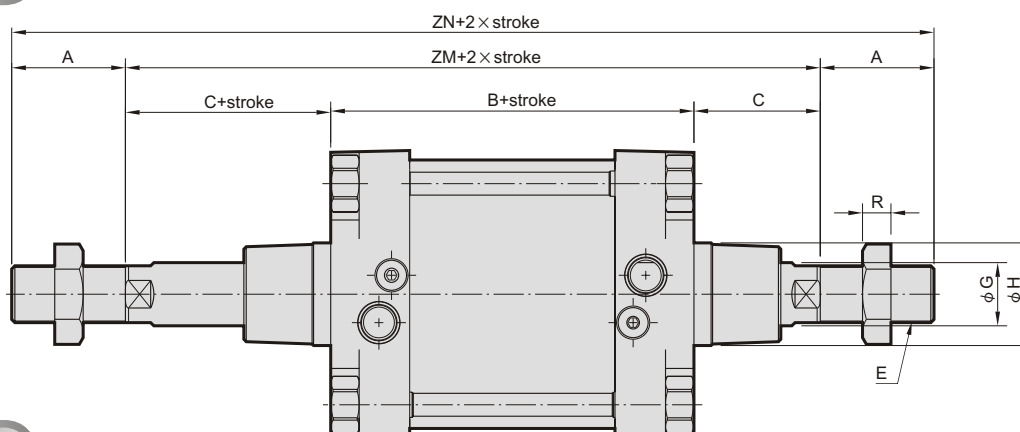


Code Tube I.D.	A	E	TD	without magnet		magnet		TJ	TK	TL	TT	TU	TX
				TF	ZB	TF	ZB						
32	22	M10×1.25	12 ^{es}	77.5	120	107.5	150	42.5	22	12	50	74	47
40	24	M12×1.25	16 ^{es}	89	135	119	165	46	22	16	63	95	53
50	32	M16×1.5	16 ^{es}	100	143	130	173	43	22	16	75	107	66
63	32	M16×1.5	20 ^{es}	110	158	140	188	48	28	20	90	130	80
80	40	M20×1.5	20 ^{es}	120.5	174	160.5	214	53.5	34	20	110	150	106
100	40	M20×1.5	25 ^{es}	131	189	171	229	58	40	25	132	182	126

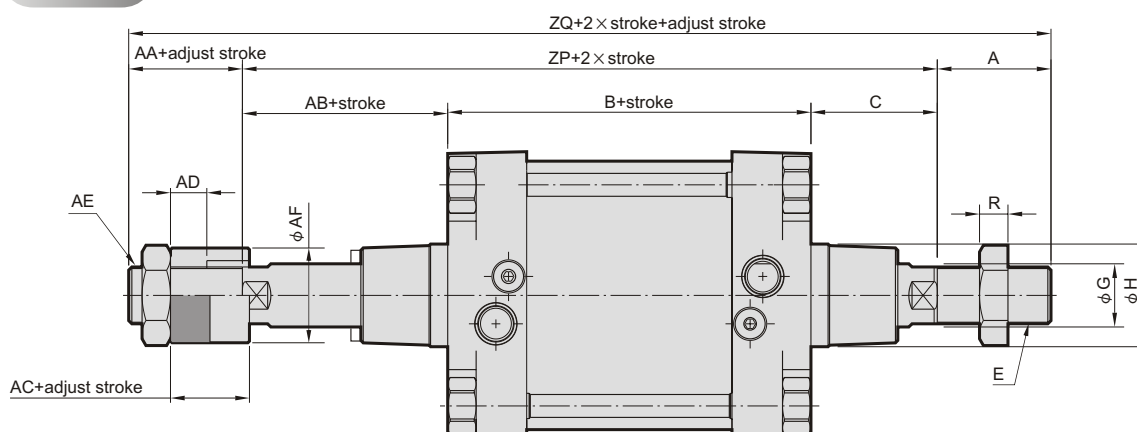
11



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

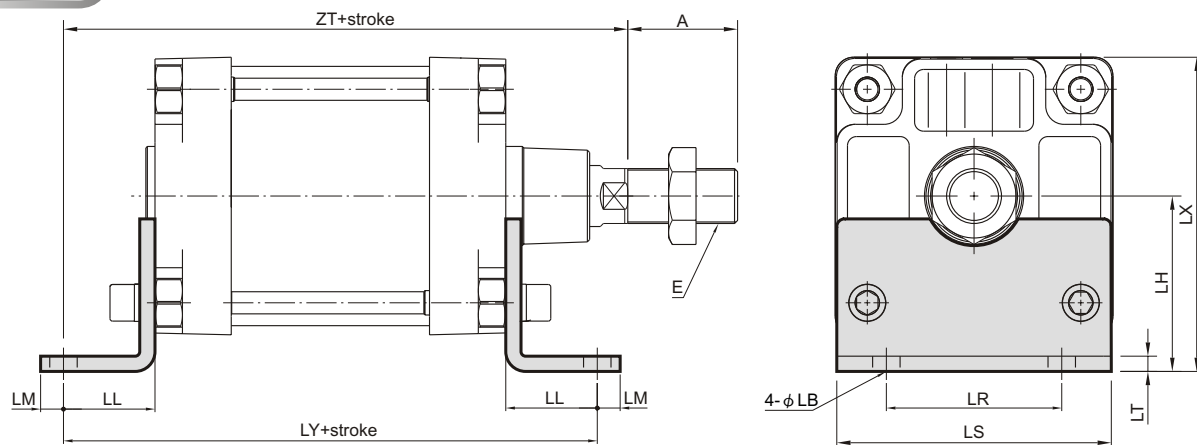
Code Tube I.D.	U	UD	X	Z	ZB	ZM	ZN	ZQ	ZP
125	11	22	140	285	225	290	398	372	280
160	12	27	182	338	260	340	484	441	331

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

ISO-VDMA STANDARD CYLINDERS

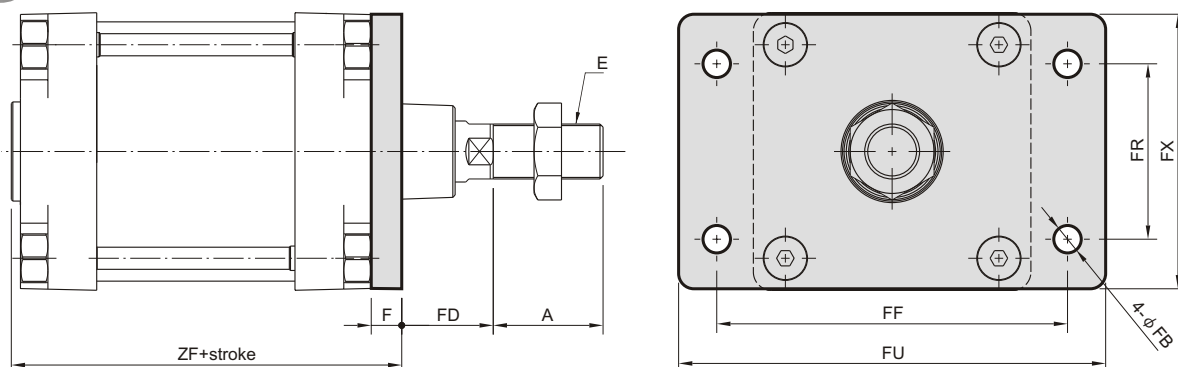


LB



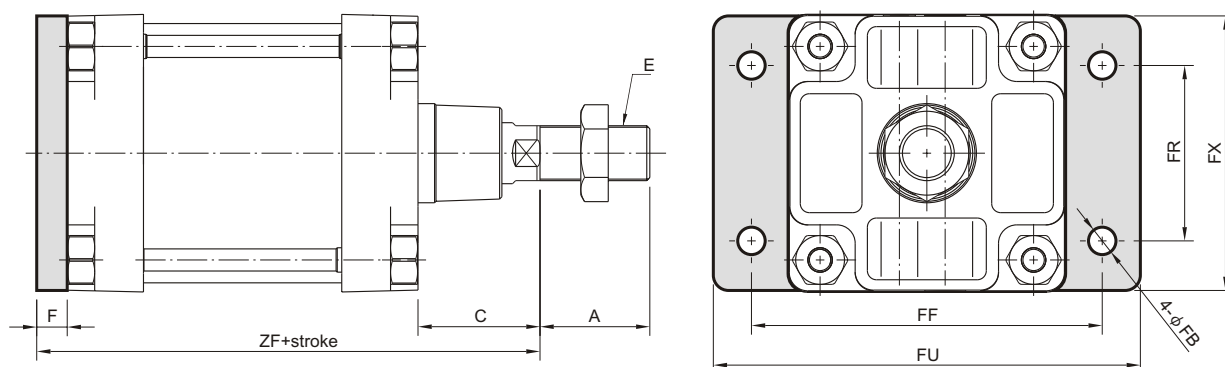
Code Tube I.D.	A	E	LB	LH	LL	LM	LR	LS	LT	LX	LY	ZT
125	54	M27×2.0	16	90	45	25	90	140	9	160	250	270
160	72	M36×2.0	18	115	60	15	115	180	10	206	300	320

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	211	140	186
160	72	M36×2.0	20	18	60	230	115	283	184	206

FBC



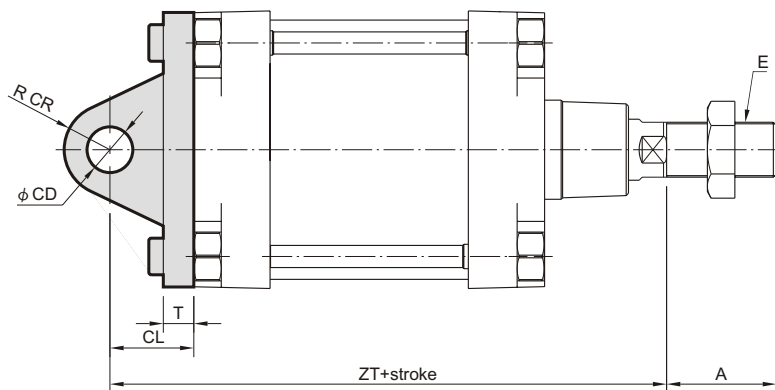
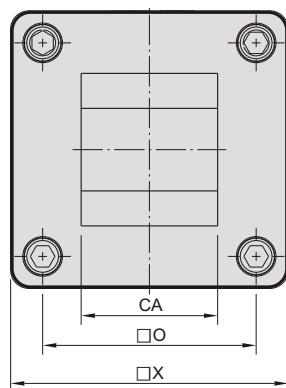
Code Tube I.D.	A	C	E	F	FB	FF	FR	FU	FX	ZF
125	54	65	M27×2.0	20	16	180	90	211	140	245
160	72	80	M36×2.0	20	18	230	115	283	184	280

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

ISO-VDMA STANDARD CYLINDERS

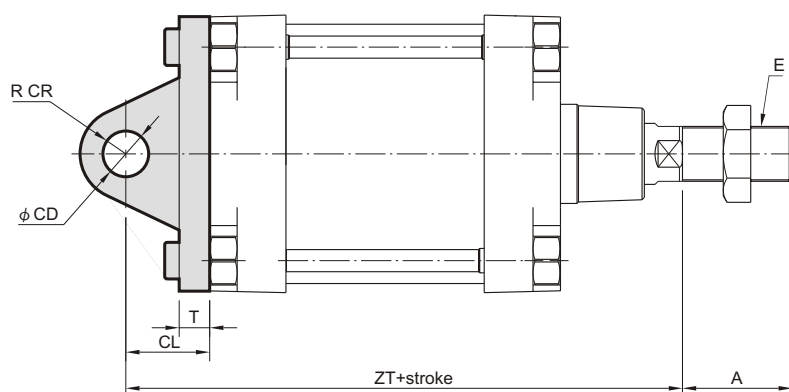
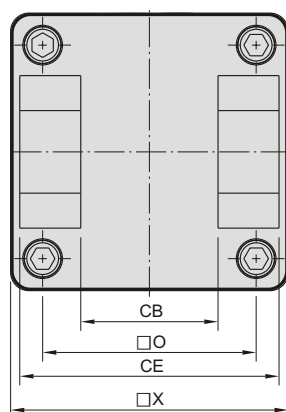


CA



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

CB



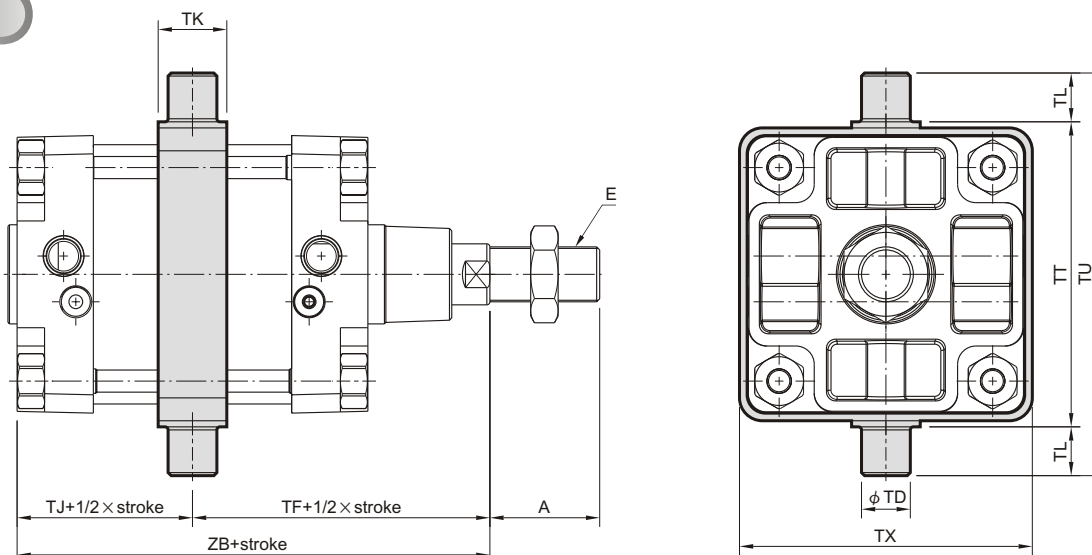
Code Tube I.D.	A	CB	CD	CE	CL	CR	E	O	T	X	ZT
125	54	70^{+H14}	25^{+H9}	$130^{+0}_{-1.0}$	50	25	M27 $\times$ 2.0	110	20	140	275
160	72	90^{+H14}	30^{+H9}	$170^{+0}_{-0.7}$	55	30	M36 $\times$ 2.0	140	20	180	315

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

ISO-VDMA STANDARD CYLINDERS

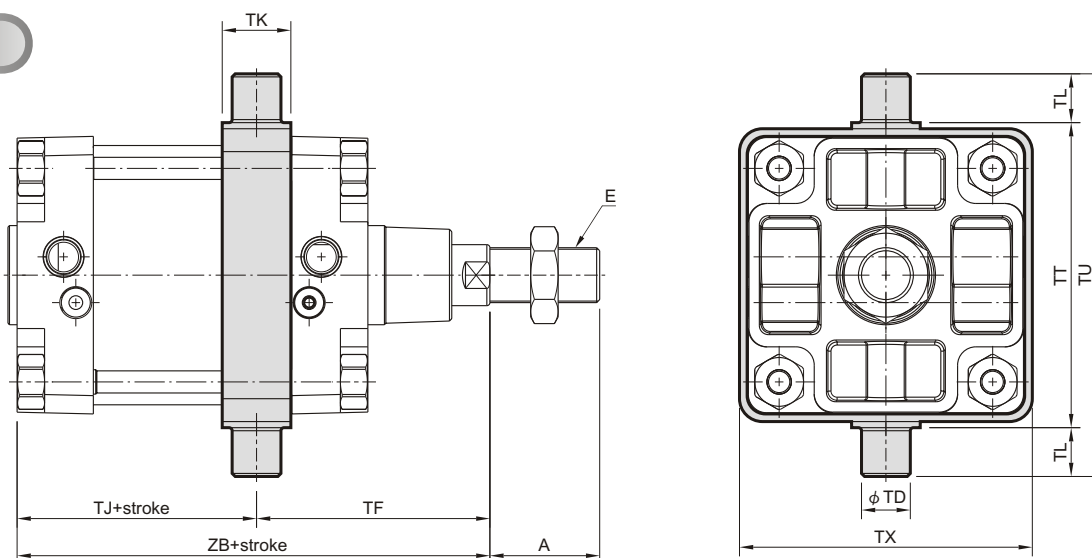


TC



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



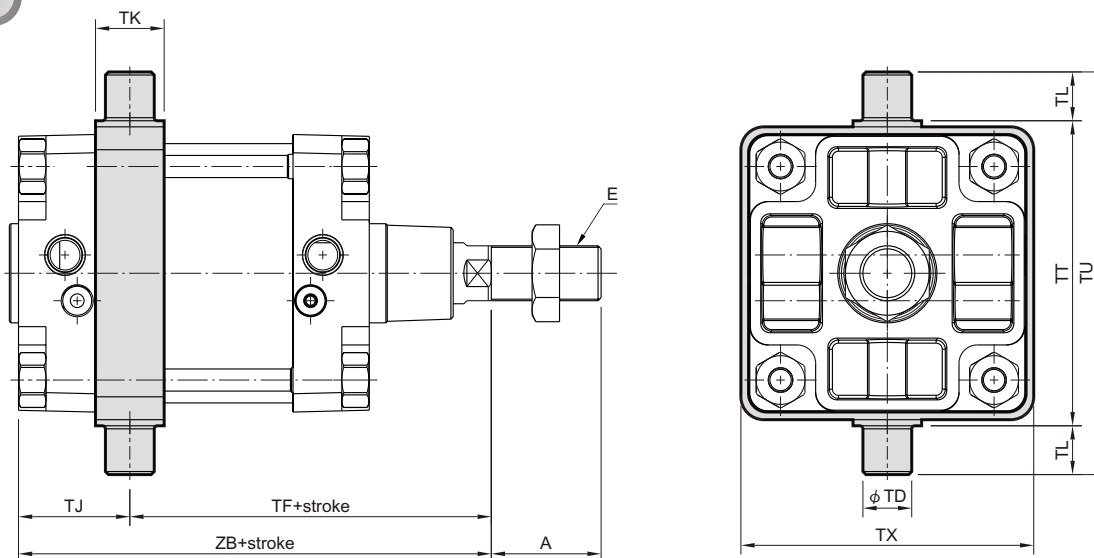
Code Tube I.D.	A	E	TD	TF	TJ	TK	TL	TT	TX	TU	ZB
125	54	M27 × 2.0	25 ^{ø9}	125	100	40	25	160	155	210	225
160	72	M36 × 2.0	32 ^{ø9}	153	107	45	32	200	192	264	260

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 ^{sg}	165	60	40	25	160	210	155	225
160	72	M36×2.0	32 ^{sg}	187	73	45	32	200	264	192	260

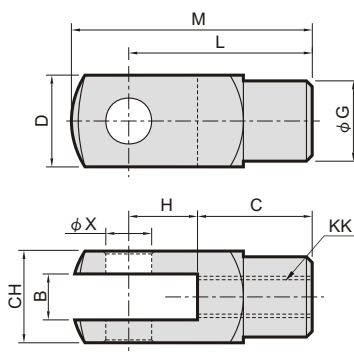
MCQV2 / MCQI2 Accessories $\phi 32 \sim \phi 100$

ISO-VDMA STANDARD CYLINDERS

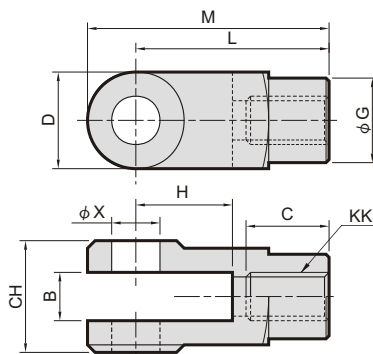


Y connector

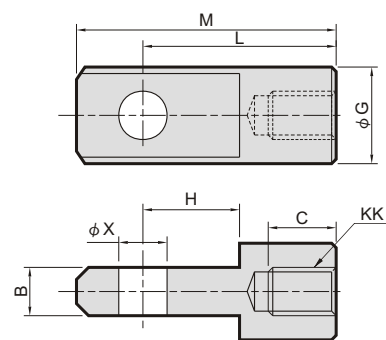
$\phi 32, \phi 40$



$\phi 50 \sim \phi 100$



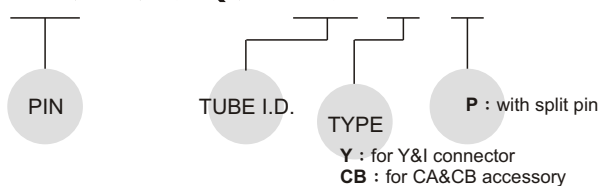
I connector



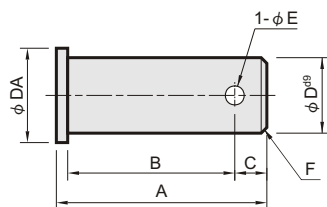
Code Tube I.D.	B		C		CH		D		G		H		L		KK		M		X ^{H9}
	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	
32	10 ^{+0.5} _{-0.15}	10 ^{-0.1} _{-0.2}	20	17	19		19		ϕ18	ϕ20	20	15	40	40	M10×1.25	52	52		ϕ10 ^{+0.04} ₀
40	12 ^{+0.5} _{-0.15}	12 ^{-0.1} _{-0.2}	24	21	24		24		ϕ20	ϕ24	24	18	48	48	M12×1.25	62	62		ϕ12 ^{+0.04} ₀
50	16 ^{+0.3} _{-0.1}	16 ^{-0.1} _{-0.3}	28	23	32		32		ϕ28	ϕ32	32	32	64	64	M16×1.5	89	86		ϕ16 ^{+0.04} ₀
63	16 ^{+0.3} _{-0.1}	16 ^{-0.1} _{-0.3}	28	23	32		32		ϕ28	ϕ32	32	32	64	64	M16×1.5	89	86		ϕ16 ^{+0.04} ₀
80	20 ^{+0.3} _{-0.1}	20 ^{-0.1} _{-0.3}	33	30	45		40		ϕ36	ϕ36	40	40	80	80	M20×1.5	100	108		ϕ20 ^{+0.05} ₀
100	20 ^{+0.3} _{-0.1}	20 ^{-0.1} _{-0.3}	33	30	45		40		ϕ36	ϕ36	40	40	80	80	M20×1.5	100	108		ϕ20 ^{+0.05} ₀

Order example: ※MCQV / MCQI are common accessories.

PIN – MCQV – 40 – Y – P

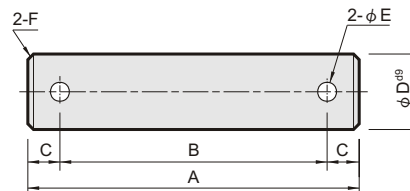


Pin



for Y.I connector

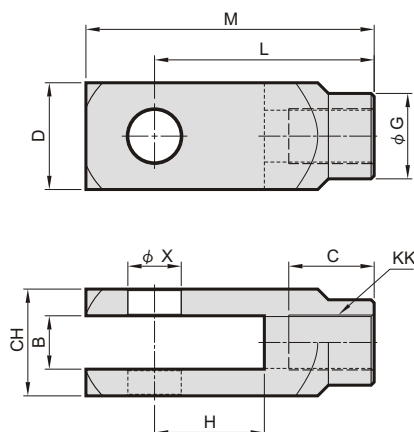
Code Tube I.D.	A	B	C	D ^{d9}	DA	E	F	Split pin
32	30	25	3.5	ϕ10 ^{-0.06} _{-0.09}	14	3.2	1	3.2×20L
40	37	30	5	ϕ12 ^{-0.06} _{-0.09}	16	3.2	1	3.2×20L
50 63	47	37	7	ϕ16 ^{-0.05} _{-0.09}	22	4	1	4×25L
80 100	62	50	8	ϕ20 ^{-0.06} _{-0.11}	30	5	1.5	5×35L



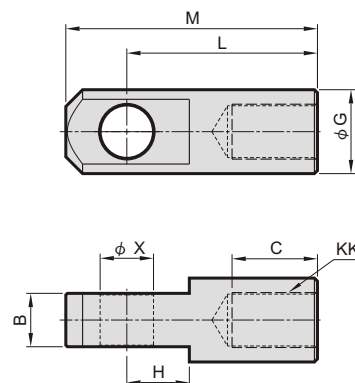
for CA.CB

Code Tube I.D.	A	B	C	D ^{d9}	E	F	Split pin
32	69	55	7	ϕ10 ^{-0.05} _{-0.09}	4	1.0	4×20L
40	76	62	7	ϕ12 ^{-0.05} _{-0.09}	4	1.0	4×20L
50	84	70	7	ϕ12 ^{-0.05} _{-0.09}	4	1.0	4×20L
63	94	80	7	ϕ16 ^{-0.05} _{-0.09}	4	1.0	4×30L
80	117	100	8.5	ϕ16 ^{-0.05} _{-0.09}	5	1.5	5×30L
100	137	120	8.5	ϕ20 ^{-0.05} _{-0.09}	5	1.5	5×35L

Y connector



I connector

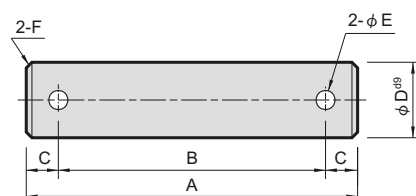
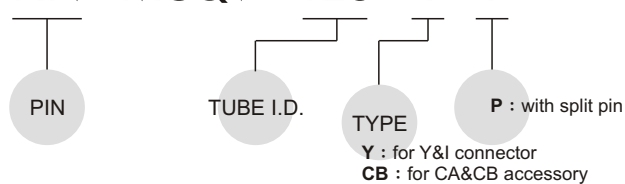


Code Tube I.D.	B		C		CH		D		G		H		KK		L		M		X ^{F7}	
	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I
125	30 ^{+0.52} ₀	30 ^{-0.2} _{-0.3}	56	51	55		55		48	55	54	40	M27×2.0	110	110	148	145	30 ^{+0.52} ₀	30 ^{+0.04} _{+0.02}	
160	35 ^{+0.62} ₀	35 ^{-0.2} _{-0.3}	56	56	70		70		56	55	72	41	M36×2.0	144	125	189	165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

Pin

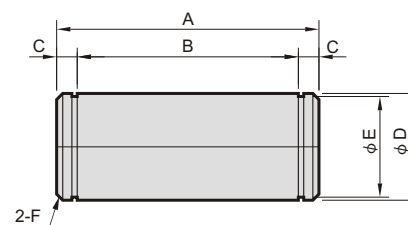
Order example:

PIN—MCQV—125—Y—P



for $\phi 125$

Code Tube I.D.	A	B	C	D ^{d9}	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



for $\phi 160$

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