

MCQV series

ISO 15552 **STANDARD CYLINDER**



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 15552 standard specification

Conforms to ISO 15552 specification enabling worldwide interchangeability.

■ Cylinder mountings

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

Specification

Model	MCQV		
Tube I.D. (mm)	125	160	200
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	RCA (Please refer to page 8-8)		
Sensor switch holder	HV4	PM16	HA5

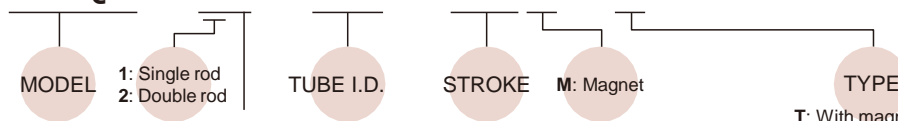
Table for standard stroke

Tube I.D.	Stroke (mm)	Max. stroke (mm)
∅125	50,75,100,125,150,175,	2000
∅160	200,250,300,350,400,	1800
∅200	450,500	1500

* Intermediate stroke are available, please contact us.

Order example

MCQV -11 -125 -100M -T



STYLE

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

T: With magnet, TA/TB is assembled

Tube, piston rod and tie rod are extended, and an extra piston is added.

* Order example for special specification, refer to page 0-7.

* Rc or NPT thread are also available, please contact us.

■ Accessories & Connector

Code	Accessories					Rod nut
	LB (Purchase 2 pcs)	CA	CB	FAC	FBC	NUT
Mounting Tube I.D.						
ø125	LB-Q2-125	CA-Q2-125	CB-Q2-125	FAC-Q2-125		NUT-M27x2.0x13.5Hx41B
ø160	LB-Q2-160	CA-Q2-160	CB-Q2-160	FAC-Q2-160		NUT-M36x2.0x18Hx55B
ø200	LB-Q2-200	CA-Q2-200	CB-Q2-200	FAC-Q2-200		

Code	Accessories <small>Factory assembled and shipped (self-assembled is not recommended)</small>				Connector	
	TA	TB	TC	SDS <small>Mid section support (Stroke over 1000mm)</small>	Y	I
Mounting Tube I.D.						
ø125	TC-Q2-125			SDS-Q2-125	Y-Q2-125	I-Q2-125
ø160	TC-Q2-160			SDS-Q2-160	Y-Q2-160	I-Q2-160
ø200	TC-Q2-200			SDS-Q2-200		

■ Pin

Applicable	Y&I connector	CA&CB accessories
Code	PIN-Y-P <small>(with split pin)</small>	PIN-CB-P <small>(with split pin)</small>
Fig Tube I.D.		
ø125	PIN-Q2-125-2-P	PIN-Q2-125-1-P
ø160	PIN-Q2-160-2-P	PIN-Q2-160-1-P
ø200		

■ Order example of self-assembled

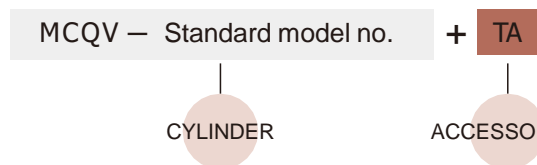
The tube I.D. ø125 of LB accessories, Y connector and pin.

No.	Order number	Qty
1	LB-Q2-125	2
2	Y-Q2-125	1
3	PIN-Q2-125-2-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

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



MCQV-11 Inside structure & Parts list

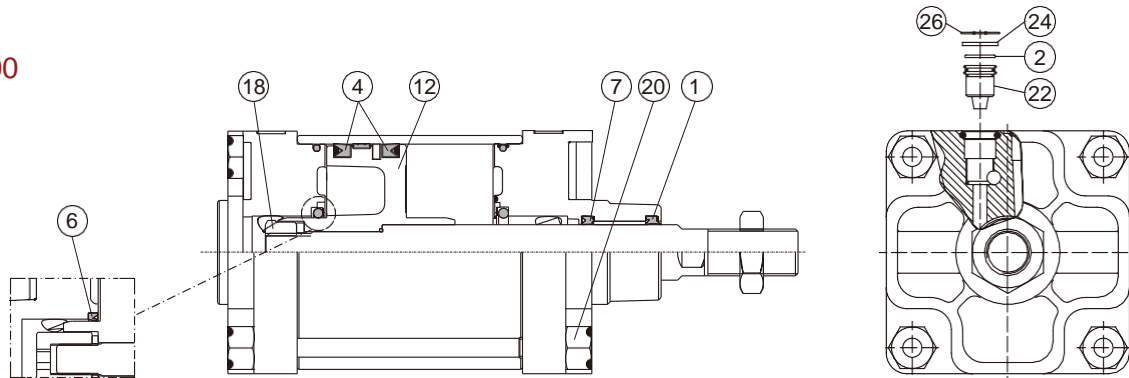
ISO 15552 STANDARD CYLINDER



Single rod 11 type

ø125~ø200

ø200



No.	Part name	Material	Q'y	Component parts (inclusion)	Repair kits (inclusion)	Note
1	Rod packing	NBR	1	●	●	
2	O-ring	NBR	2	●	●	
3	O-ring	NBR	2	●	●	
4	Piston packing	NBR	2	●	●	
5	O-ring	NBR	1	●	●	
6	Cushion packing	NBR	2	●	● ^{*1}	
7	Rod packing	NBR	1	●	●	
8	Rod cover	Aluminum alloy	1	●		
9	Head cover	Aluminum alloy	1	●		
10	Piston-R	Aluminum alloy	1			
11	Piston-H	Aluminum alloy	1			
12	Piston	Aluminum alloy	1	●		
13	Bush	Bearing alloy	1	●		
14	Magnet ring	Magnet material	1	◎		◎ Option
15	Wear ring	Resin	1	●		
16	Hex nut	Carbon steel	1	●		
17	Bolt	Carbon steel	1			
18	Piston nut	Carbon steel	1	●		
19	Washer	Carbon steel	1	●		
20	Tie rod nut	Carbon steel	8	●		
21	Tie rod washer	Carbon steel	8			
22	Needle valve	Copper alloy	2	●		
23	Insert nut	Copper alloy	2			
24	Needle valve washer	Carbon steel	2	●		
25	Cover plate	Plastic	2			
26	Snap ring	Carbon steel	2	●		
27	Cylinder tube	Aluminum alloy	1			
28	Piston rod *2	Carbon steel	1			
29	Tie rod	Carbon steel	4			

*1. Cushion packing is not included in ø200 repair kits.

*2. When customized material is bearing steel, only two-side across flat (wrench flat) is available.

MCQV-2* Inside structure & Parts list

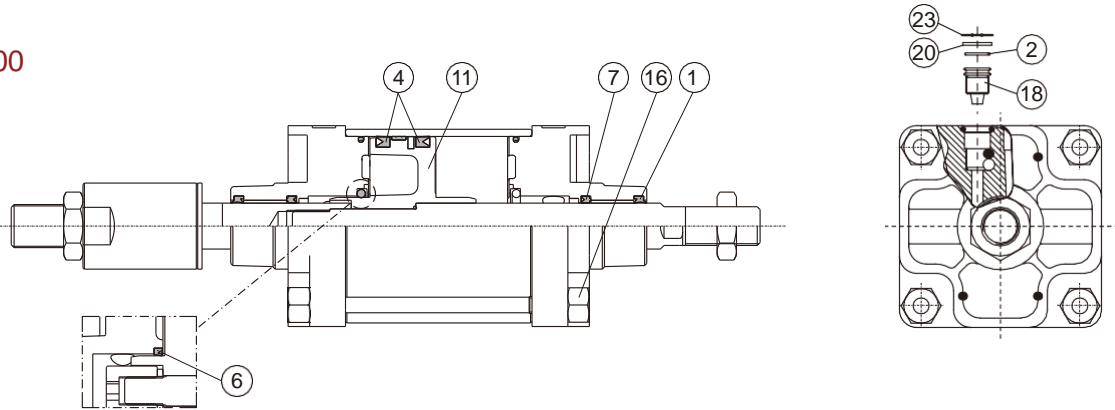
ISO 15552 STANDARD CYLINDER



Double rod 21 / 27 type

ø125~ø200

ø200



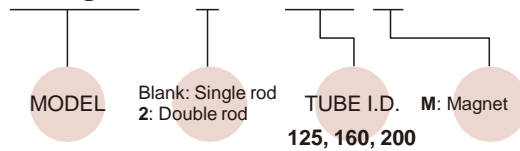
No.	21 type	27 type	Part name	Material	Q'y	Component parts (inclusion)	Repair kits (inclusion)	Note
1	●	●	Rod packing	NBR	2	●	●	
2	●	●	O-ring	NBR	2	●	●	
3	●	●	O-ring	NBR	2	●	●	
4	●	●	Piston packing	NBR	2	●	●	
5	●	●	O-ring	NBR	1	●	●	
6	●	●	Cushion packing	NBR	2	●	●*1	
7	●	●	Rod packing	NBR	2	●	●	
8	●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

*1. Cushion packing is not included in ø200 repair kits.

*2. When customized material is bearing steel, only two-side across flat (wrench flat) is available.

■ Order example of component parts

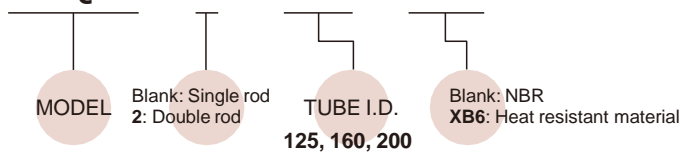
CP –MCQV –2 –125 M



* Order example for Rc or NPT thread please contact us.

■ Order example of repair kits

PS –MCQV –2 –125 –XB6



■ Cylinder & accessories weight

Cylinder weight

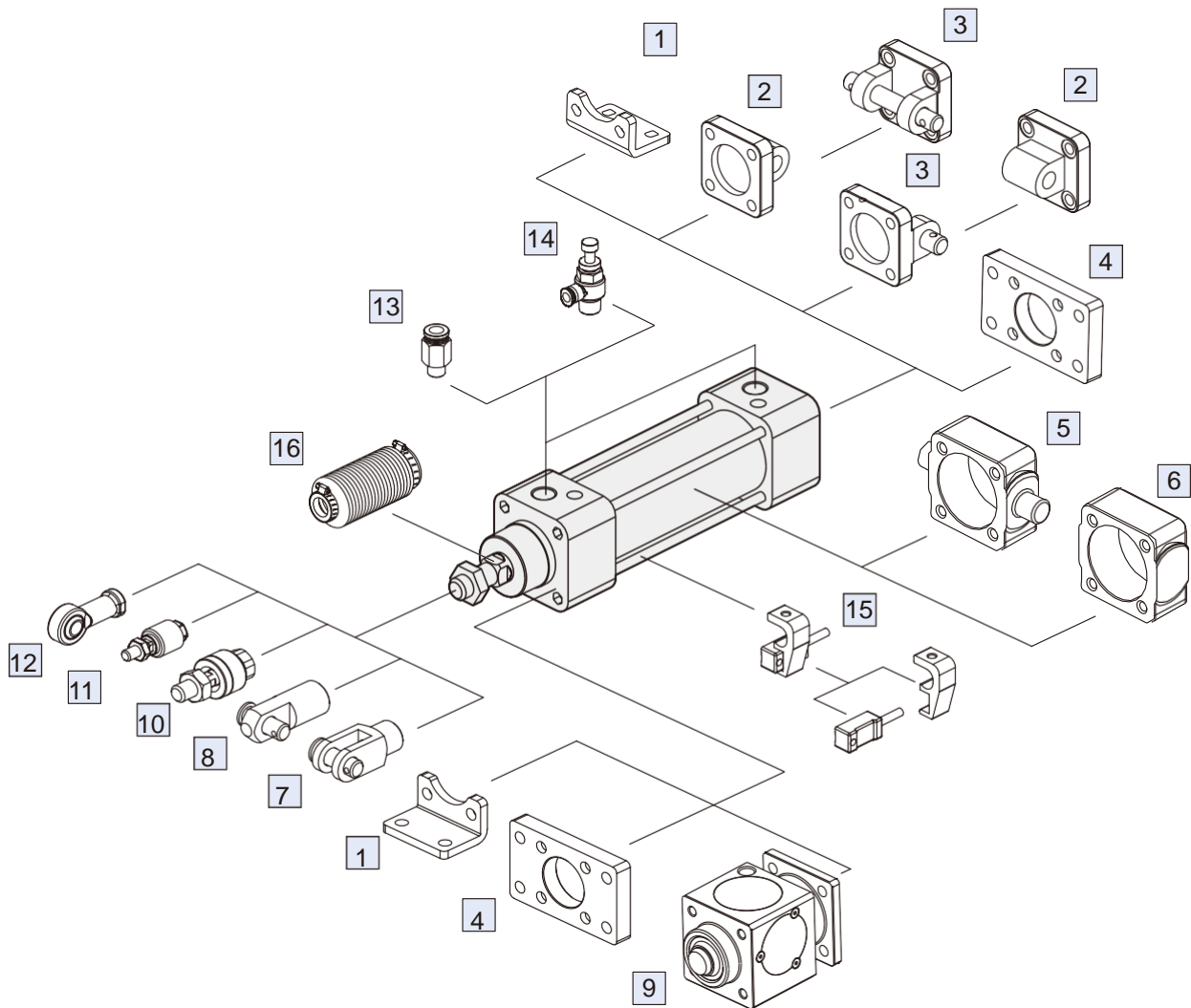
Unit: kg

Model	Basic weight MCQV-11	Basic weight (magnet) MCQV-11	Stroke 25 mm MCQV-11
Tube I.D.			
$\varnothing 125$	7.345	7.388	0.372
$\varnothing 160$	13.864	13.974	0.555
$\varnothing 200$	19.450	19.560	0.570

Accessories weight

Unit: kg

Model	LB	CA	CB	FAC/FBC	TA/TB/TC	SDS	Y	I	Pin	
									Y / I	CA / CB
Tube I.D.										
$\varnothing 125$	2.500	3.780	3.560	4.020	2.750	2.528	1.160	1.400	0.382	0.525
$\varnothing 160$	4.600	7.400	7.140	7.170	5.130	3.907	2.482	1.727	0.567	0.906
$\varnothing 200$	7.342	9.440	9.208	10.852	6.981	6.627	2.482	1.727	0.567	0.906



No.	Accessories	Material	Page
1	Mounting accessories LB	Carbon steel	1-37
2	Mounting accessories CA	Cast iron	1-38
3	Mounting accessories CB+PIN	Cast iron / *1	1-38, 41
4	Mounting accessories FAC/FBC	Carbon steel	1-37
5	Mounting accessories TA/TB/TC	Cast iron	1-39, 40
6	Mounting accessories SDS	Cast iron	1-39
7	Accessories Y+PIN	Cast iron / *1	1-41
8	Accessories I+PIN	Carbon steel	1-41

No.	Accessories	Material	Page
9	Locking unit MCBQV	Aluminum alloy+*2	1-88
10	Floating joint MFC	Carbon steel	8-2
11	Floating joint MFCS	Carbon steel	8-5
12	Female rod ends PHS	Carbon steel	8-6
13	Fitting PC (PISCO)	—	8-3 (Vol.1)
14	Speed controller JSC (PISCO)	—	8-15 (Vol.1)
15	Sensor switch RCA+HV*	—	8-8
16	Protective bellows kit	NBR	—

*1. PIN material is carbon steel.

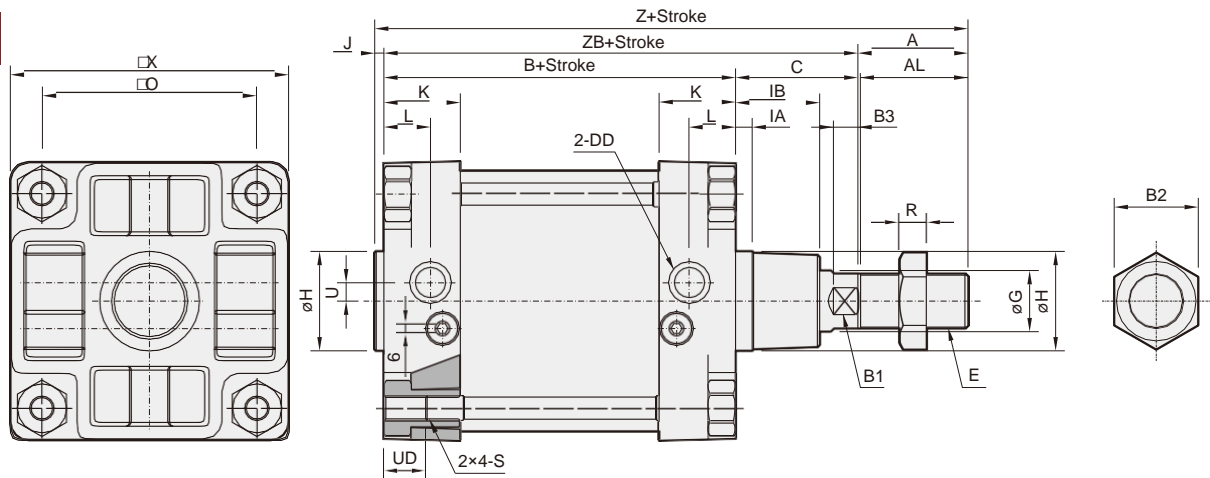
*2. Bronze alloy.

MCQV Dimensions $\varnothing 125 \sim \varnothing 200$

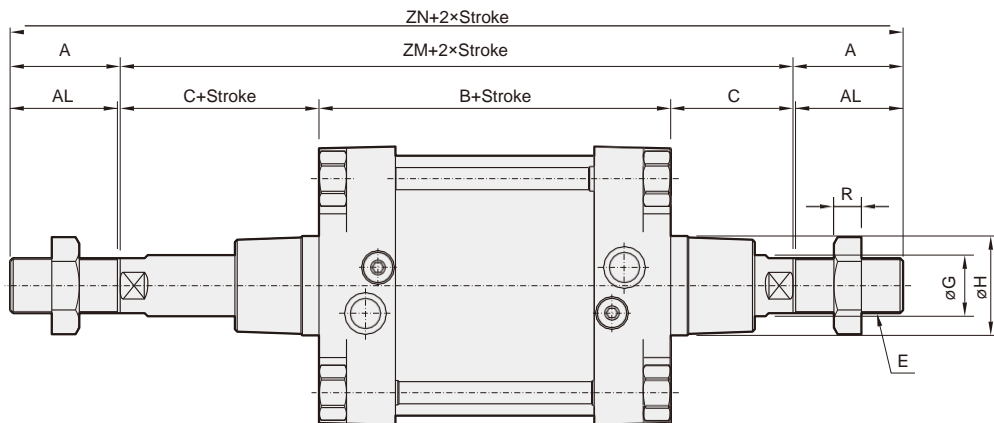
ISO 15552 STANDARD CYLINDER



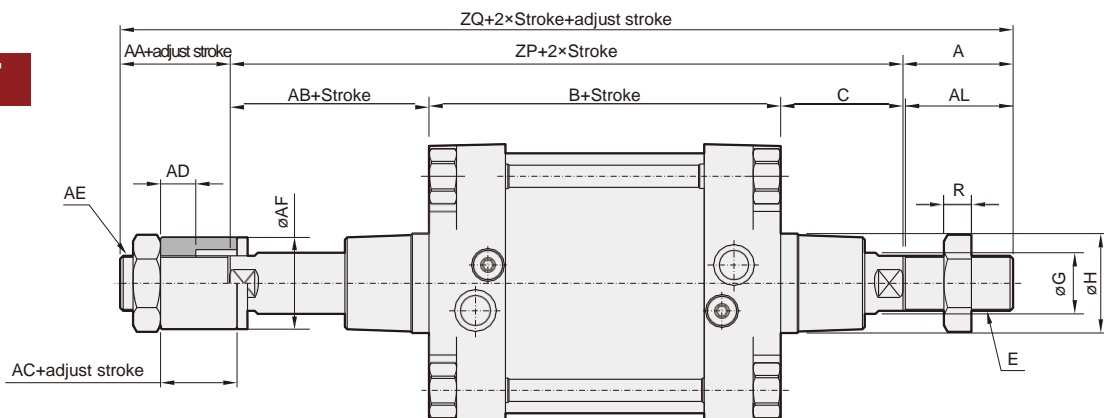
11



21



27



Code Tube I.D.	A	AA	AB	AC	AD	AE	AF	AL	B	B1	B2	B3	C	DD	E	G	H	IA	IB	J	K	L	O	R
125	54	38	55	30	18	M30x1.5	60	52	160	27	41	13	65	G1/2	M27x2	32	60e11	10	40	6	40	25	110	13.5
160	72	38	71	30	18	M30x1.5	60	70	180	36	55	16	80	G3/4	M36x2	40	65e11	10	55	6	50	30.5	140	18
200	72	40	70	30	18	M36x2.0	60	70	180	36	55	16	95	G3/4	M36x2	40	75e11	15	55	6	56	36.5	175	18

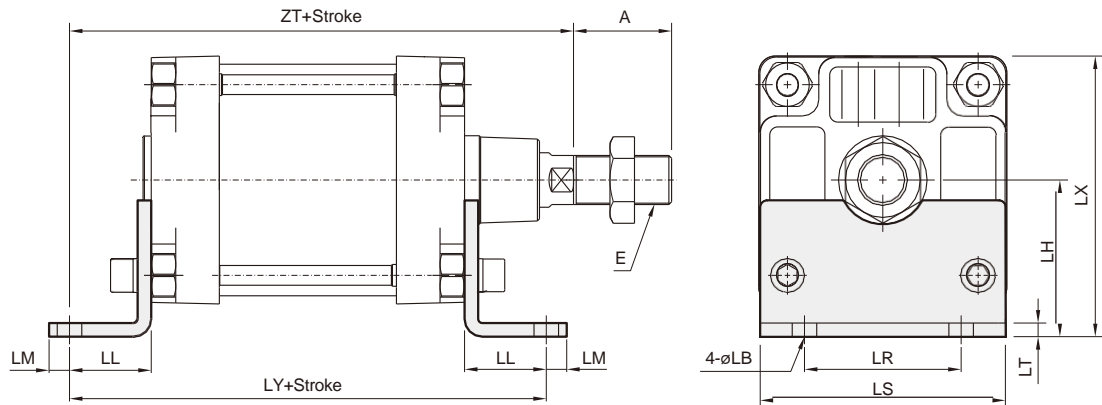
Code Tube I.D.	S	U	UD	X	Z	ZB	ZM	ZN	ZP	ZQ
125	M12x1.75	11	22	140	285	225	290	398	280	372
160	M16x2.0	12	27	182	338	260	340	484	331	441
200	M16x2.0	12	27	220	353	275	370	514	369.5	457

MCQV Mounting accessories $\varnothing 125\sim\varnothing 200$

ISO 15552 STANDARD CYLINDER

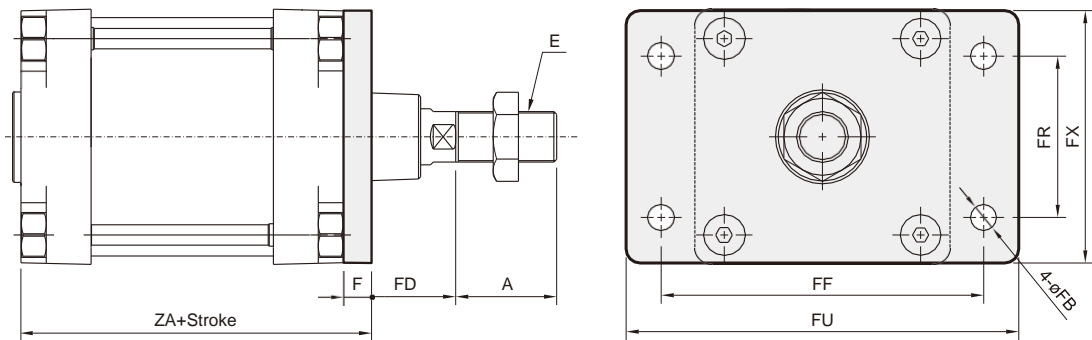


LB

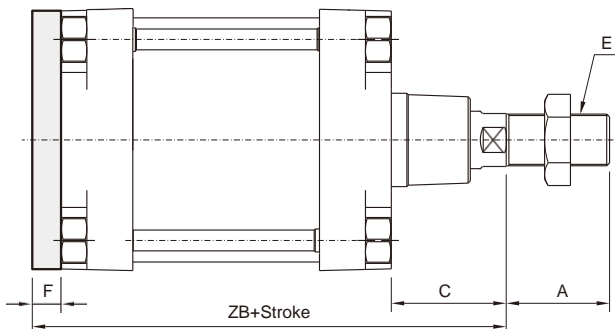


Code Tube I.D.	A	E	LB	LH	LL	LM	LR	LS	LT	LX	LY	ZT
125	54	M27×2.0	16	90	45	25	90	140	9	160	250	270
160	72	M36×2.0	18	115	60	15	115	180	10	206	300	320
200	72	M36×2.0	24	135	70	35	135	220	12	245	320	345

FAC



FBC



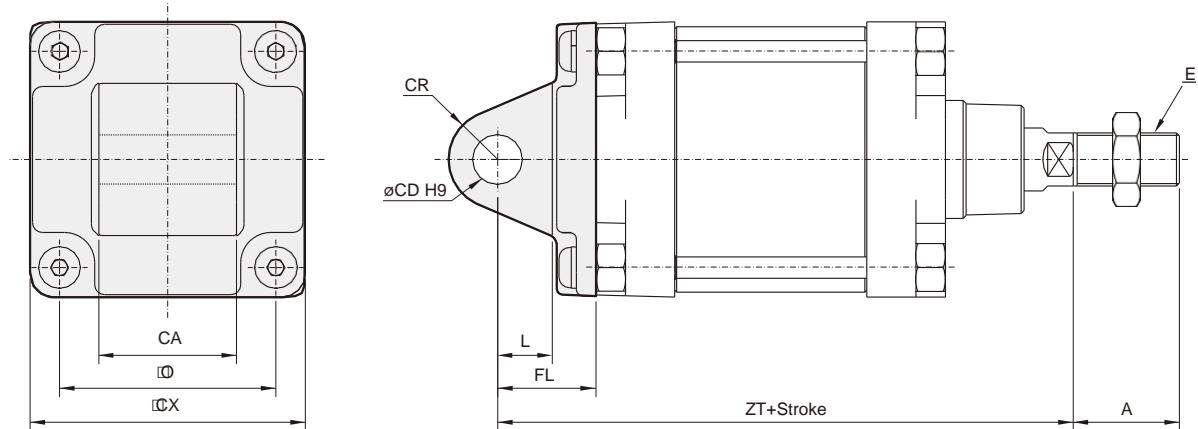
Code Tube I.D.	A	E	F	FB	FD	FF	FR	FU	FX	ZA	ZB
125	54	M27×2.0	20	16	45	180	90	210	140	180	245
160	72	M36×2.0	20	18	60	230	115	280	180	200	280
200	72	M36×2.0	25	22	70	270	135	320	220	205	300

MCQV Mounting accessories $\varnothing 125\sim\varnothing 200$

ISO 15552 STANDARD CYLINDER

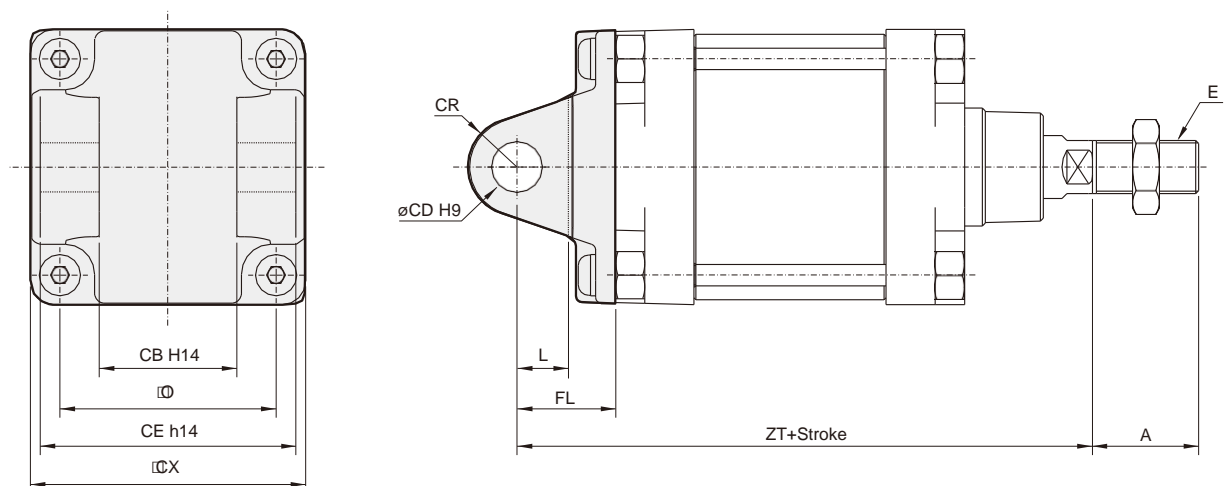


CA



Code Tube I.D.	A	CA	CD	CR	CX	E	FL	L	O	ZT
125	54	69.5 ⁰ _{-0.7}	25	R25	139	M27×2.0	50	30	110	275
160	72	89.5 ⁰ _{-0.7}	30	R30	178	M36×2.0	55	35	140	315
200	72	90 ^{-0.5} _{-1.2}	30	R30	218	M36×2.0	60	35	175	335

CB



Code Tube I.D.	A	CB	CD	CE	CR	CX	E	FL	L	O	ZT
125	54	70	25	130	R25	139	M27×2.0	50	30	110	275
160	72	90	30	170	R30	178	M36×2.0	55	35	140	315
200	72	90	30	170	R30	218	M36×2.0	60	35	175	335

MCQV Mounting accessories $\varnothing 125\sim\varnothing 200$

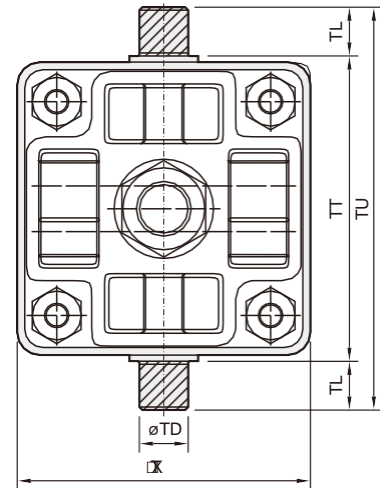
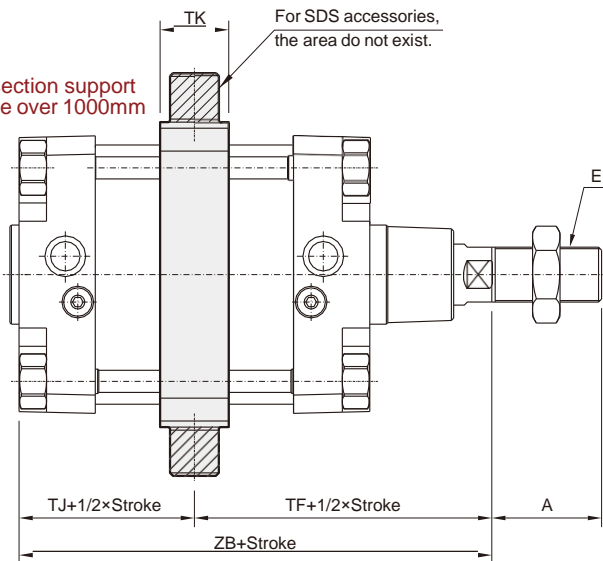
ISO 15552 **STANDARD CYLINDER**



TC

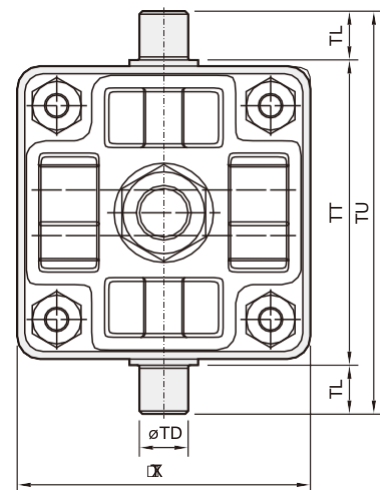
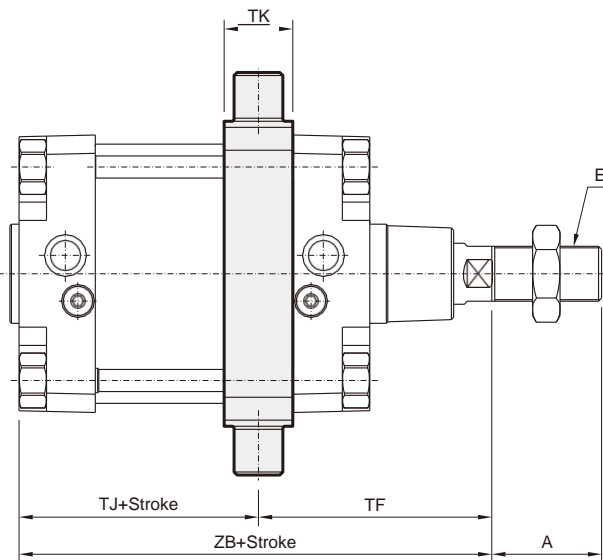
SDS

Mid section support
Stroke over 1000mm



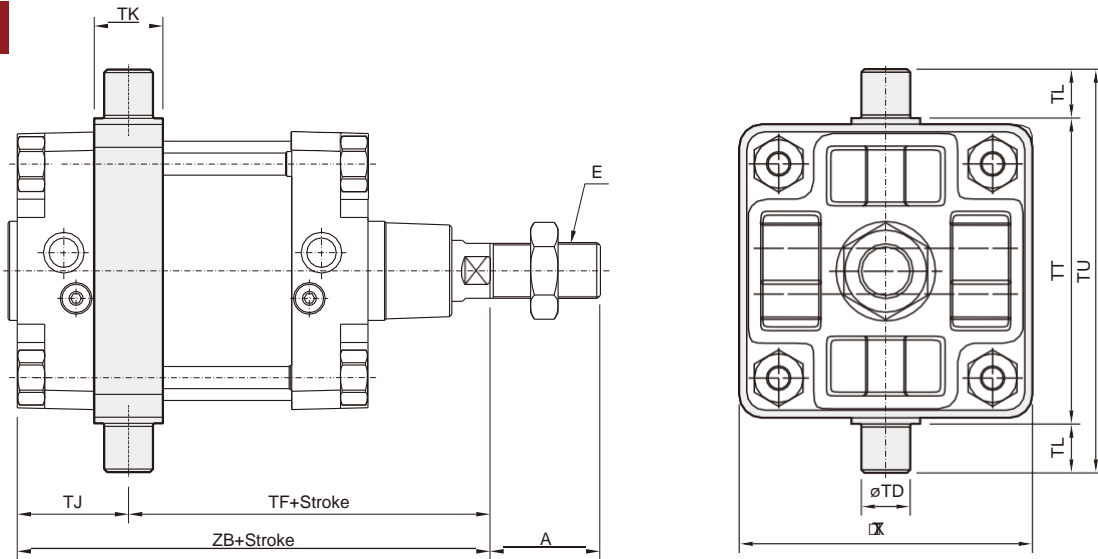
Code Tube I.D.	A	E	TD	TF	TJ	TK	TL	TT		TU	TX	ZB
								TC	SDS			
125	54	M27×2.0	25e9	145	80	40	25	160	158	210	155	225
160	72	M36×2.0	32e9	170	90	45	32	200	198	264	192	260
200	72	M36×2.0	32e9	185	90	45	32	250	250	314	240	275

TA



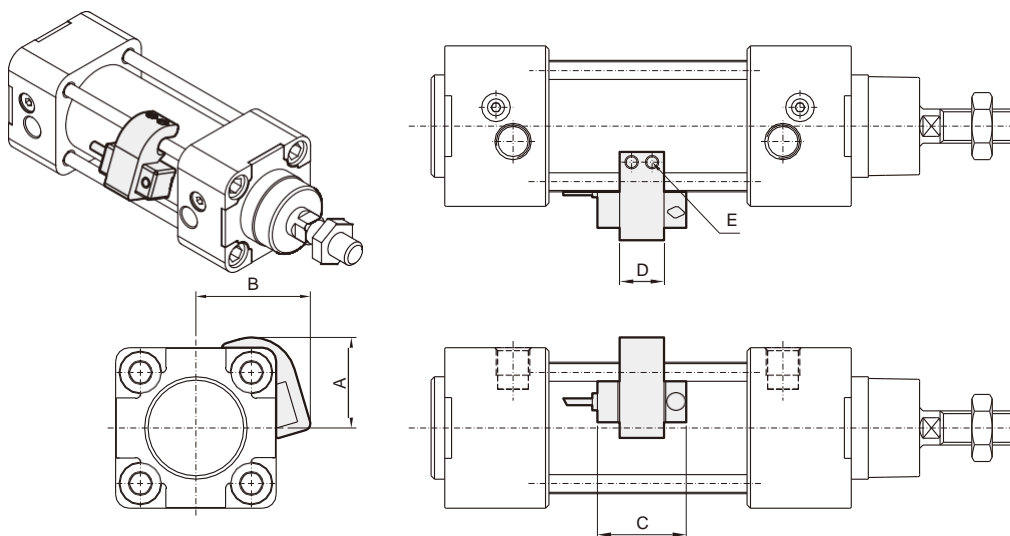
Code Tube I.D.	A	E	TD	TF	Without magnet		Magnet		TK	TL	TT	TX	TU
					TJ	ZB	TJ	ZB					
125	54	M27×2.0	25e9	125	100	225	146	271	40	25	160	155	210
160	72	M36×2.0	32e9	152.5	107.5	260	157.5	310	45	32	200	192	264
200	72	M36×2.0	32e9	173.5	101.5	275	145.5	319	45	32	250	240	275

TB



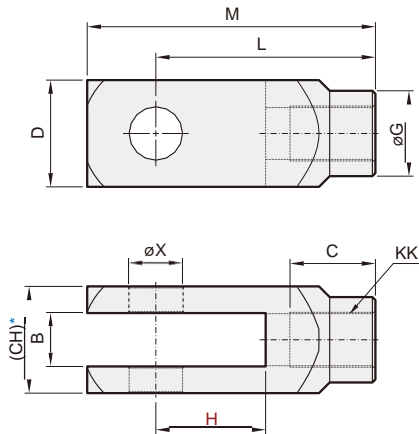
Code Tube I.D.	A	E	TD	TJ	Without magnet		Magnet		TK	TL	TT	TX	TU
					TF	ZB	TF	ZB					
125	54	M27×2.0	25e9	60	165	225	211	271	40	25	160	155	210
160	72	M36×2.0	32e9	72.5	187.5	260	237.5	310	45	32	200	192	264
200	72	M36×2.0	32e9	78.5	196.5	275	240.5	319	45	32	250	240	275

■ Installation of sensor switch

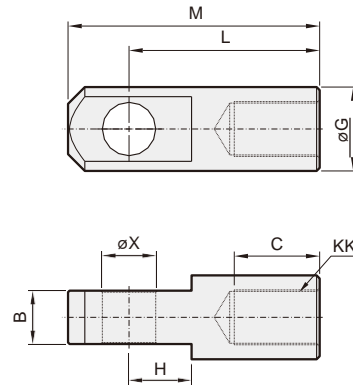


Code Tube I.D.	Sensor switch	Hold	C	D	E
MCQV-125	RCA	HV4	26	13	M4×10L
MCQV-160	RCA	PM16	26	12	M4×10L
MCQV-200	RCA	HA5	26	15	M4×16L

Y connector



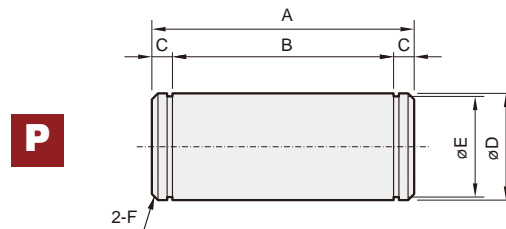
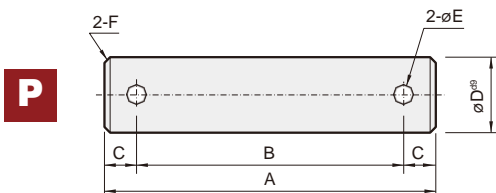
I connector



* 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.

Code	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 ^{+0.04} _{+0.02}	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}	
200	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



for $\varnothing 125$

Code Type	A	B	C	D ^{g9}	E	F	Split pin
CB	157	140	8.5	$\varnothing 25$ ^{-0.07} _{-0.12}	5	1.5	5×36L
Y	81	64	8.5	$\varnothing 30$ ^{-0.07} _{-0.12}	6.3	1.5	6.3×40L

for $\varnothing 160, \varnothing 200$

Code Type	A	B	C	D	E	F	Snap ring
CB	186	172	7	30 ^{h8} _{-0.05} ^{-0.09}	28.6 ⁰ _{-0.21}	2	STW-30
Y	86	72	7	35 ^{h7} ₋₀ ^{-0.03}	33 ⁰ _{-0.25}	2	STW-35