Features

■ Non lubrication
- Special housing and bushing enable self lubrication of piston rod.

■ High quality long service life
- Hard anodised stainless steel cylinder tubes offer a high resistance to corrosion and low internal friction.
- Cylinder mountings, available with a comprehensive range of accessories for rigid or flexible mounting.
- Operation, with the exception of MCMA-11, single and doubling type available MCMA-13 / 15.

■ Magnetic as standard

Specification

Model		MCMA				
Tube I.D.		16	20	25	32	40
Port size		M5×0.8	Rc1/8			
Medium		Air				
Max. operating perssure		0.7 MPa				
Min. operating perssure		Double: 0.06 MPa ; Single: 0.15 MPa				
Proof pressure		1 MPa				
Lubricator		Not required				
Ambient temperature		-5~+60°C (No freezing)				
Available speed range		50~750 mm/sec				
Max. allowable kinetic energy (J)	Cushion pad	0.16	0.27	0.4	0.65	1.2
	Cushion air	0.32	0.54	0.78	1.27	2.35
Sensor switch		RCM (Please refer to page 8-16)				
Sensor switch (band)		BM16	BM20	BM25	BM32	BM40

* For precautions, please refer to page 3-2.

Table for standard stroke

	Tube I.D.	Stroke (mm)
Single acting	ø16	15,25,50,75,100
	ø20, 25, 32	15,25,50,75,100,125,150
Double acting	ø16	15,25,50,75,100,125,150,200,250, 300,350,400,450,500
	ø20, 25, 32,40	15,25,50,75,100,125,150,200,250, 300,350,400,450,500

* Available with double action type cylinder with stroke more than 500 mm. Sub-piston increases the total length of cylinder by 10 mm and provides further stability.
* Please contact us if the stroke is out of specification.

Order example

MCMA — 11 — 32 — 100 — A — N — □

- MODEL
- STYLE — **1**: Single rod; **2**: Double rod
- TUBE I.D.
- STROKE
- Blank: Cushion pad (Unadjustable); **A**: Cushion air (Adjustable) ⚠
- Blank: Standard; **N**: Non-pivot type (end-plain)
- PORT THREAD — Blank: M5×0.8 (for ø16); Blank: Rc thread; **G**: G thread; **NPT**: NPT thread (for ø20~ø40)

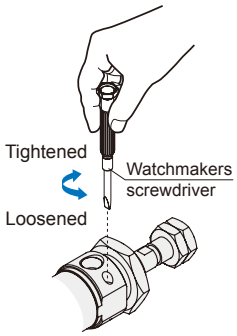
Code		Symbol	Description
1	1		Double acting / Male thread
1	3		Single acting / Normally extended male thread
1	5		Single acting / Normally returned male thread
2	1		Double rod / Male thread
2	3		Single acting / Double rod male thread
2	7		Double rod / Adjustable male thread Please mark "adjustable distance(mm)" at order list

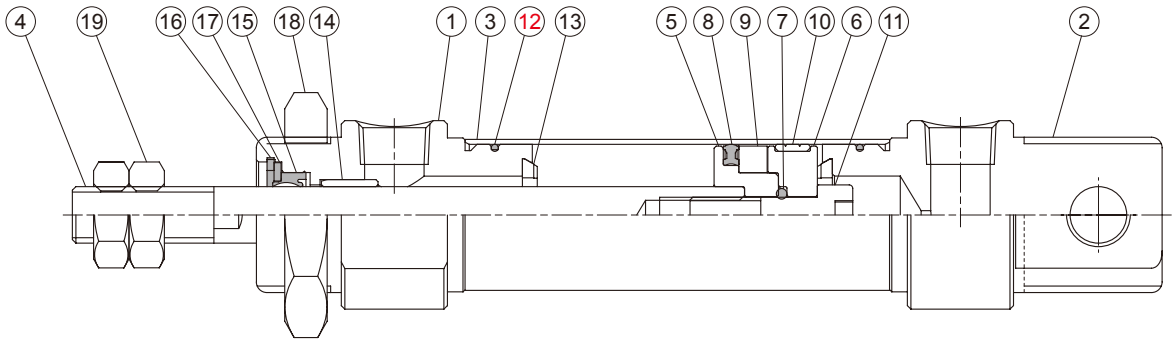
* Order example for special specification, refer to page 0-7.

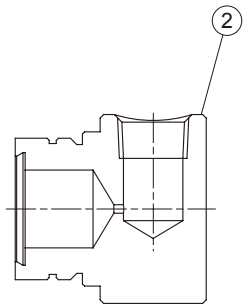
⚠ Caution

For (**A**) Cushion air (Adjustable)

1. To adjust a cushion needle, please slowly turn the needle valve from the fully closed status to the required status which needs to be within 2.5 turns.
2. If the needle valve loosen excessively, the buffer doesn't take effect and the lifetime of cylinder would be shortened.







N type

Material

No.	Tube I.D. / Part name	16	20	25	32	40	Q'y 11 type	Q'y 21 type	Component parts (inclusion) 11 type	Component parts (inclusion) 21 type
1	Rod cover	Aluminum alloy					1	2	●	●
2	Head cover	Aluminum alloy					1	—	●	
3	Tube	Stainless steel					1	1		
4	Piston rod	*1 Carbon steel					1	1		
5	Piston-R	Aluminum alloy					1	1	●	●
6	Piston-H	Aluminum alloy					1	1	●	●
7	Piston gasket	NBR					1	1	●	●
8	Piston packing	NBR					1	1	●	●
9	Magnet ring	Magnet material					1	1	●	●
10	Wear ring	Resin					1	1	●	●
11	Piston bolt	SCM					1	—	●	
12	Cover ring	NBR	–			NBR	2	2	●	●
13	Cushion gasket	NBR					2	2	●	●
14	Rod bush	Bearing alloy					1	2	●	●
15	Rod packing *2	NBR					1	2	●	●
16	Snap ring	Spring steel					1	2	●	●
17	Washer	Carbon steel					1	2	●	●
18	Tie nut	Carbon steel					1	2	●	●
19	Rod front nut	Carbon steel					2	2	●	●

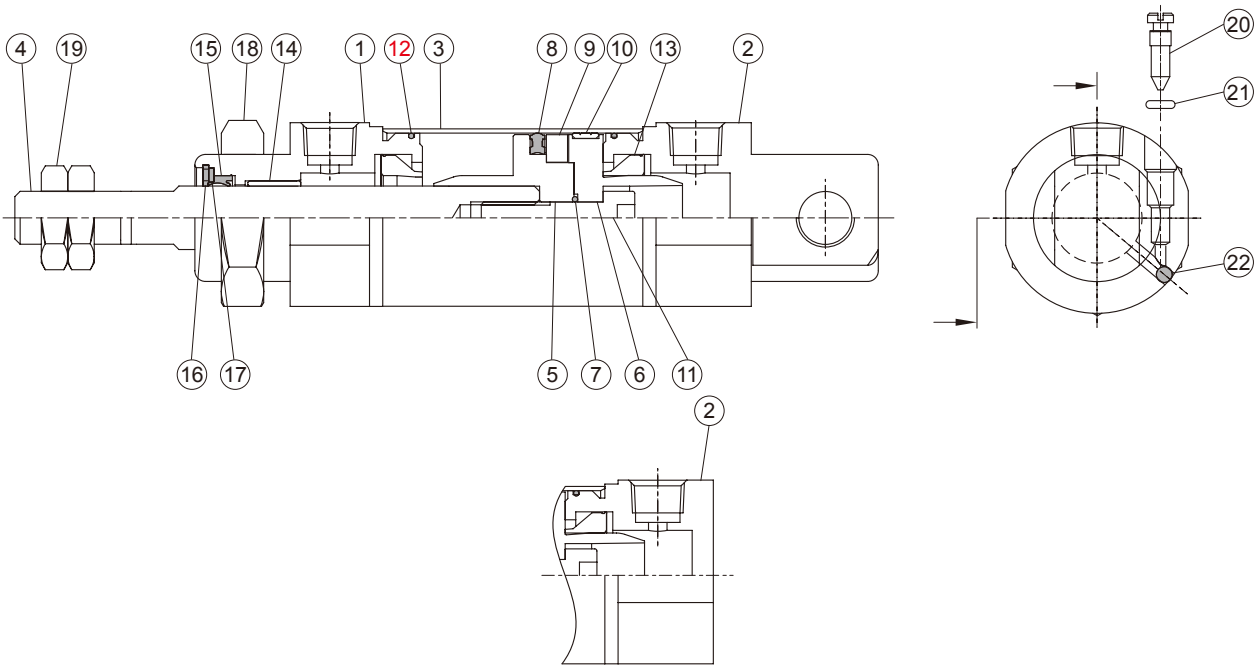
*1. Stainless steel
*2. Only the rod packing is repairable, please contact our sales if needed.

Order example of Component parts

Tube I.D.	Component parts
ø16	**CP-MCMA-16**
ø20	**CP-MCMA-20**
ø25	**CP-MCMA-25**
ø32	**CP-MCMA-32**
ø40	**CP-MCMA-40**

Non-pivot type (End-plain)

Tube I.D.	Component parts
ø16	**CP-MCMA-16-N**
ø20	**CP-MCMA-20-N**
ø25	**CP-MCMA-25-N**
ø32	**CP-MCMA-32-N**
ø40	**CP-MCMA-40-N**



N type

Material

No.	Tube I.D. / Part name	16	20	25	32	40	Q'y 11 type	Q'y 21 type	Component parts (inclusion) 11 type	Component parts (inclusion) 21 type
1	Rod cover	Aluminum alloy					1	2	●	●
2	Head cover	Aluminum alloy					1	–	●	
3	Tube	Stainless steel					1	1		
4	Piston rod	*1	Carbon steel				1	1		
5	Piston-R	Aluminum alloy					1	1	●	●
6	Piston-H	Aluminum alloy					1	1	●	●
7	Piston gasket	NBR					1	1	●	●
8	Piston packing	NBR					1	1	●	●
9	Magnet ring	Magnet material					1	1	●	●
10	Wear ring	Resin					1	1	●	●
11	Piston bolt	SCM					1	–	●	
12	Cover ring	NBR	–			NBR	2	–	●	●
13	Cushion packing	NBR					2	2	●	●
14	Rod bush	Bearing alloy					1	2	●	●
15	Rod packing *2	NBR					1	2	●	●
16	Snap ring	Spring steel					1	2	●	●
17	Washer	Carbon steel					1	2	●	●
18	Tie nut	Carbon steel					1	2	●	●
19	Rod front nut	Carbon steel					2	2	●	●
20	Needle valve	Stainless steel				Carbon steel	2	2	●	●
21	Needle valve packing	NBR					2	2	●	●
22	Steel ball	Stainless steel					2	2	●	●

*1. Stainless steel
*2. Only the rod packing is repairable, please contact our sales if needed.

Order example of Component parts

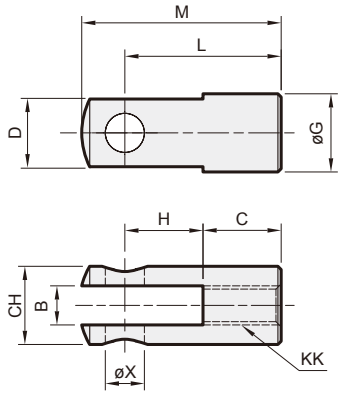
Tube I.D.	Component parts
ø16	**CP-MCMA-16A**
ø20	**CP-MCMA-20A**
ø25	**CP-MCMA-25A**
ø32	**CP-MCMA-32A**
ø40	**CP-MCMA-40A**

Non-pivot type (End-plain)

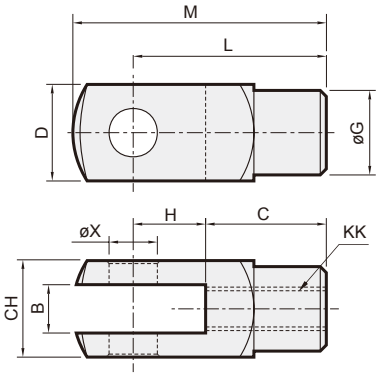
Tube I.D.	Component parts
ø16	**CP-MCMA-16A-N**
ø20	**CP-MCMA-20A-N**
ø25	**CP-MCMA-25A-N**
ø32	**CP-MCMA-32A-N**
ø40	**CP-MCMA-40A-N**

Y connector

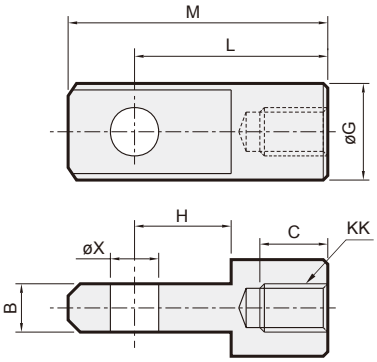
ø8~ø16



ø20~ø40



I connector

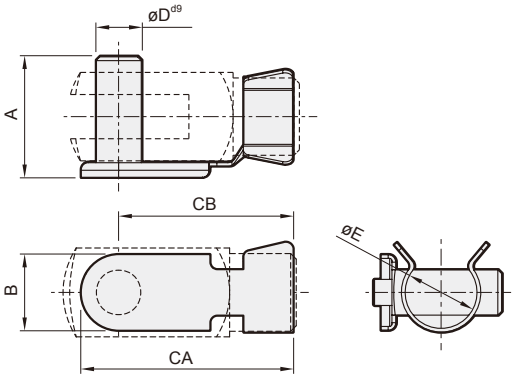


Code / Tube I.D.	B		C		CH		D		G		H		L		M		X
	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	Y	I	
8,10	4 +0.4 +0.1	–	8	–	8	–	8	–	–	–	8	–	16	–	20.75	–	4 +0.1 +0.01
12,16	6 +0.4 +0.1	6 -0.2 -0.3	12	8	12	–	–	–	12	12	12	10	24	21	31	28	6 +0.1 +0.01
20	8 +0.5 +0.15	8 -0.1 -0.2	16	14	16	–	16	–	14	16	16	12	32	32	42	42	8 +0.1 +0.01
25,32	10 +0.5 +0.15	10 -0.1 -0.2	20	17	19	–	19	–	18	20	20	15	40	40	52	52	10 +0.1 +0.01
40	12 +0.5 +0.15	12 -0.1 -0.2	24	21	22	–	22	–	20	24	24	18	48	48	62	62	12 +0.1 +0.01

Code / Tube I.D.	KK (MCMA)		KK (MCMI)	
	Y	I	Y	I
8,10	M4×0.7	–	M4×0.7	–
12,16	M6×1.0			
20	M8×1.25			
25	M10×1.25			
32	M10×1.25		M10×1.5	
40	M12×1.25		M12×1.75	

PIN

S

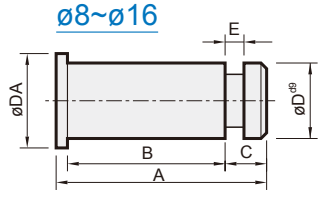


for floating pin

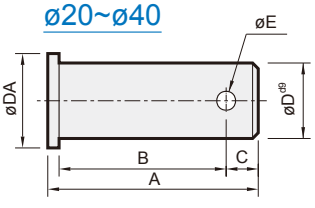
Code / Tube I.D.	A	B	CA	CB	D d9	E
16	16	10	28	23	ø6 -0.03 -0.06	9.5
20	22	12	37	31	ø8 -0.04 -0.08	13.5
25,32	26	14	45	38	ø10 -0.04 -0.08	17
40	31	16	54	46	ø12 -0.05 -0.09	19

P

ø8~ø16



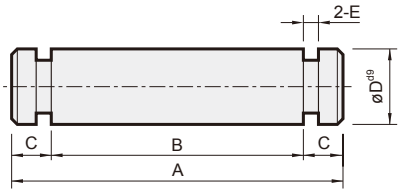
ø20~ø40



for Y & I connector

Code / Tube I.D.	A	B	C	D d9	DA	E	Split pin
8,10	12	8.5	2	4 -0.03 -0.06	8	0.7	E3
12,16	18.5	15	2	6 -0.03 -0.06	10	0.7	E4
20	24.5	20.5	2.5	8 -0.04 -0.08	12	ø2.5	2.5×16L
25,32	30	25	3.5	10 -0.04 -0.08	14	ø3.2	3.2×20L
40	37	30	5	12 -0.05 -0.09	16	ø3.2	3.2×20L

P



for SDB

Code / Tube I.D.	A	B	C	D d9	E	Split pin
8,10	18	14	2	4 -0.03 -0.06	0.7	E3.2
12	23.5	19.5	2	6 -0.03 -0.06	0.7	E5
16	21	17	2	6 -0.03 -0.06	0.7	E5
20,25	30	25	2.5	8 -0.04 -0.08	0.9	E7
32	33	27	3	10 -0.04 -0.08	0.9	E9
40	37	31	3	12 -0.05 -0.09	0.9	E9