

Features

- Compact in width and length with precision guidance.
- High lateral loads can be applied on both side and linear bearing unit.
- Magnetic as standard.

Specification

Model	MCDA					
Acting type	Double acting					
Tube I.D.(mm)	6	12	16	20	25	32
Port size	M5×0.8			Rc1/8		
Medium	Air					
Operating pressure range (MPa)	Max. 0.7					
	Min. 0.15		0.1		0.05	
Proof pressure	1 MPa					
Ambient temperature	-5~+60°C (No freezing)					
Cushion	With rubber cushion pad (both side)					
Available speed range	50~300		50~500 mm/sec			
Lubrication	Not required (If lubrication is used, apply turbine oil NO1 ISO VG32)					
Sensor switch (*1)	RCB(*2), RCE, RCE1, RDEP					

*1. RCB, RCE, RCE1, RDEP specification, please refer to page 8-8, 10, 14.

*2. RCB only for tube I.D. 12~32.

Order example

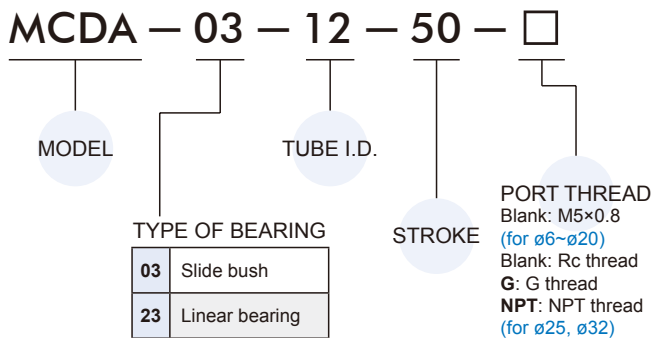




Table for standard stroke

Tube I.D.	Stroke (mm)
ø6	10,20,30,40,50
ø12	10,15,20,25,30,35,40,45,50,60,70,75,80,90,100,110,120,125,150
ø16	10,15,20,25,30,35,40,45,50,60,70,75,80,90,100,110,120,125,150
ø20	10,15,20,25,30,35,40,45,50,60,70,75,80,90,100
ø25	10,15,20,25,30,35,40,45,50,60,70,75,80,90,100,110,120,125,150,175,200
ø32	10,15,20,25,30,35,40,45,50,60,70,75,80,90,100

- Stroke out of specification is also available.
- Please consult us if stroke out of specification.
- It is possible to adjust length of basic stroke by 0~5mm.

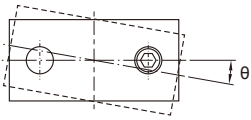
Cylinder weight

Unit: g

Model	Basic weight MCDA	Stroke 5mm MCDA
Tube I.D.		
ø6	85.8	7.5
ø12	150	8
ø16	222	13
ø20	376	18
ø25	557	27
ø32	1105	42

DUAL-ROD CYLINDER

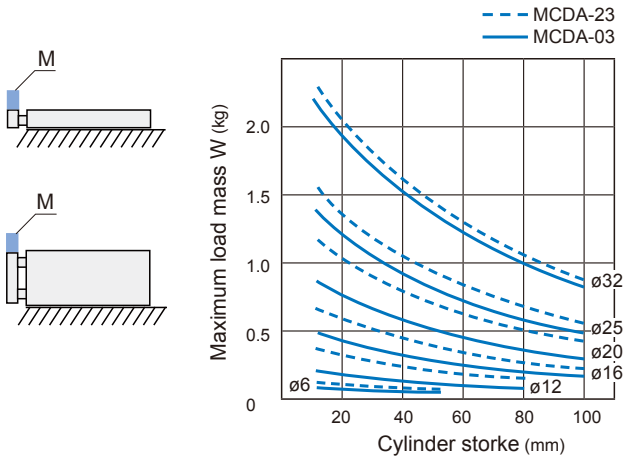
Anti-roll accuracy



Code Type	θ
MCDA-03	$\pm 0.1^\circ$
MCDA-23	$\pm 0.15^\circ$

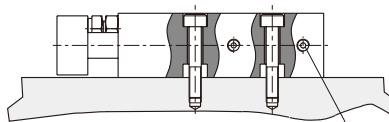
Maximum load mass

When the cylinder mounted as shown in the diagrams below, the maximum load mass W should not exceed the values illustrated in the graph.

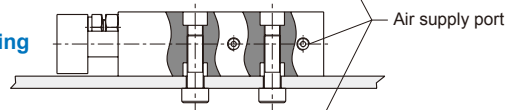


Mounting methods

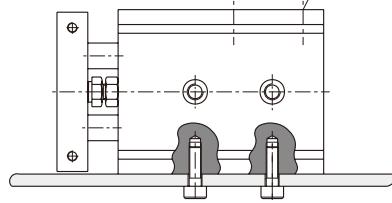
Top mounting



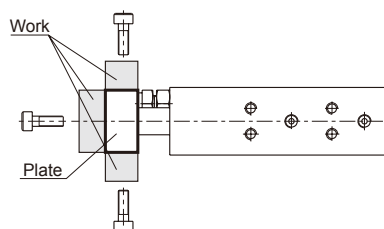
Bottom mounting



Side mounting

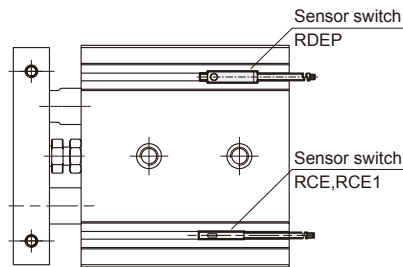
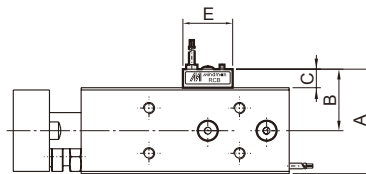
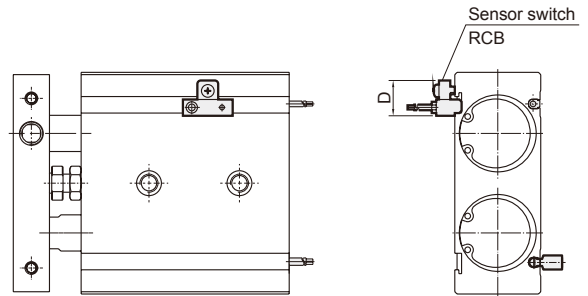


Work can be mounted on three faces of the rod square plate.



Installation of sensor switch

Sensor switch: RCB, RCE, RCE1, RDEP



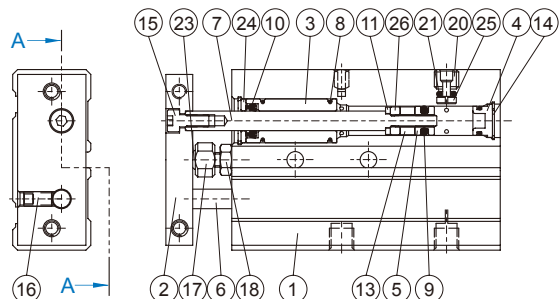
Code Tube I.D.	A	B	C	D	E
12	26.5	17.5	8.5	16	22
16	28.5	18.5	8.5	16	22
20	33.5	21	8.5	16	22
25	38.5	23.5	8.5	16	22
32	46.5	27.5	8.5	16	22

MCDA-03 Inside structure & Parts list

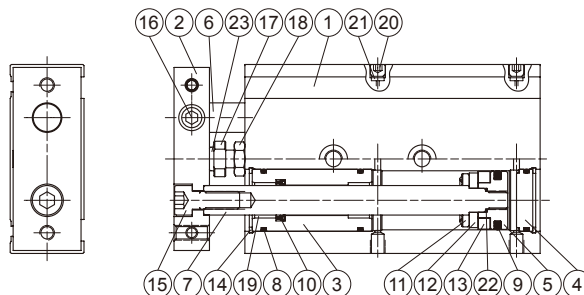
DUAL-ROD CYLINDER



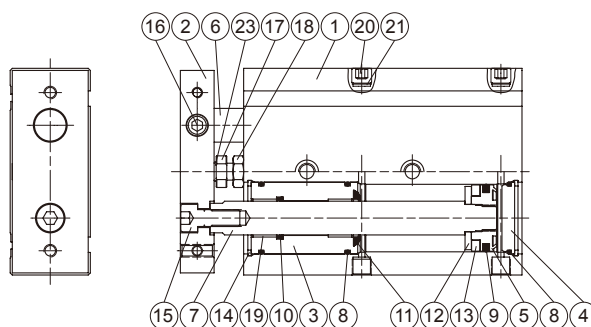
ø6



ø12~ø20



ø25,ø32



Material

No.	Part name	Tube I.D.						Note	Q'y	Repair kits (inclusion)
		6	12	16	20	25	32			
1	Body	Aluminum alloy							1	
2	Plate	Aluminum alloy							1	
3	Rod cover	Aluminum alloy							2	
4	End cover	Aluminum alloy							2	
5	Piston	Aluminum alloy							2	
6	Piston rod #1	Stainless steel				(*)			1	
7	Piston rod #2	Stainless steel				(*)			1	
8	Cover ring	NBR							6	●
9	Piston packing	NBR							2	●
10	Rod packing	NBR							2	●
11	Rod cushion	NBR							2	●
12	Magnet holder	Stainless steel							2	
13	Magnet ring	Magnet material							2	
14	Snap ring	Spring steel							4	
15	Screw	Stainless steel							1	
16	Set screw	Stainless steel							1	
17	Cushion screw	Stainless steel							1	
18	Nut	Carbon steel							1	
19	Rod bush	Bearing alloy							4	
20	Plug (set screw)	Carbon steel							2	
21	Plug ring	NBR							2	●
22	O-ring	NBR						only ø20	2	●
23	Bumper	PU							1	
24	Rod cover washer	Stainless steel						only ø6	2	
25	Plug gasket	Stainless steel						only ø6	1	
26	Spaced ring	Aluminium						only ø6	2	

* Carbon steel

Order example of repair kits

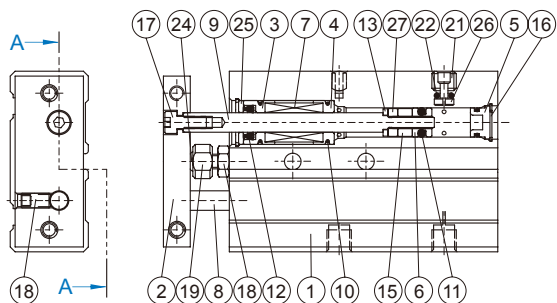
Tube I.D.	Repair kits
ø6	PS-MCDA-6
ø12	PS-MCDA-12
ø16	PS-MCDA-16
ø20	PS-MCDA-20
ø25	PS-MCDA-25
ø32	PS-MCDA-32

MCDA-23 Inside structure & Parts list

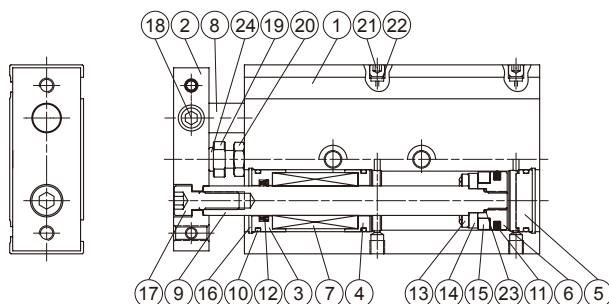
DUAL-ROD CYLINDER



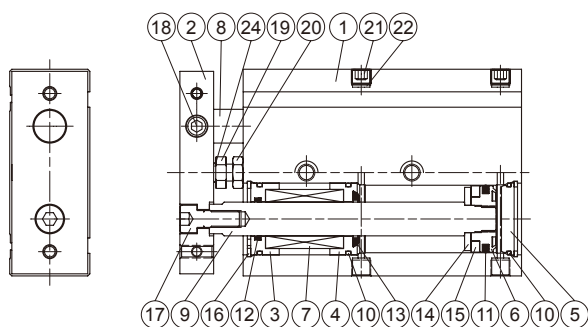
ø6



ø12~ø20



ø25,ø32



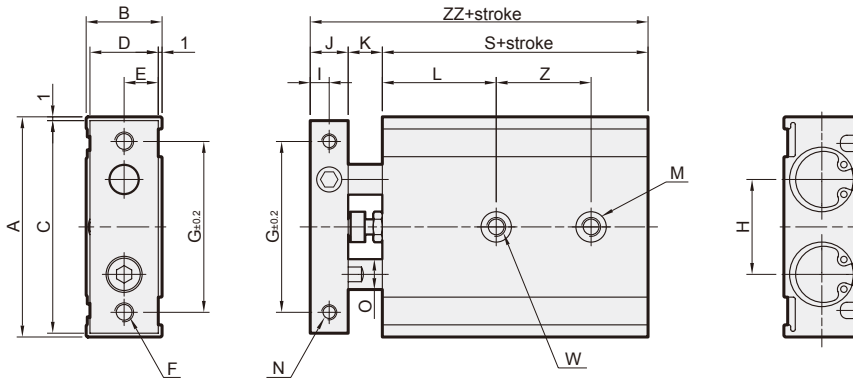
Material

No.	Part name	Tube I.D.						Note	Q'y	Repair kits (inclusion)
		6	12	16	20	25	32			
1	Body	Aluminum alloy							1	
2	Plate	Aluminum alloy							1	
3	Rod cover #1	Aluminum alloy							2	
4	Rod cover #2	Aluminum alloy							2	
5	End cover	Aluminum alloy							2	
6	Piston	Aluminum alloy							2	
7	Slide bush	-							2	
8	Piston rod #1	Special steel							1	
9	Piston rod #2	Special steel							1	
10	Cover ring	NBR							6	●
11	Piston packing	NBR							2	●
12	Rod packing	NBR							2	●
13	Rod cushion	NBR							2	●
14	Magnet holder	Stainless steel							2	
15	Magnet ring	Magnet material							2	
16	Snap ring	Spring steel							4	
17	Screw	Stainless steel							1	
18	Set screw	Stainless steel							1	
19	Cushion screw	Stainless steel							1	
20	Nut	Carbon steel							1	
21	Plug(set screw)	Carbon steel							2	
22	Plug ring	NBR							2	●
23	O-ring	NBR						only ø20	2	●
24	Bumper	PU							1	
25	Rod cover washer	Stainless steel						only ø6	2	
26	Plug gasket	Stainless steel						only ø6	1	
27	Spaced ring	Aluminum						only ø6	2	

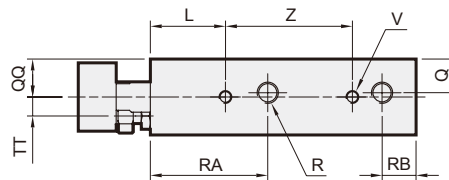
Order example of repair kits

Tube I.D.	Repair kits
ø6	PS-MCDA-6
ø12	PS-MCDA-12
ø16	PS-MCDA-16
ø20	PS-MCDA-20
ø25	PS-MCDA-25
ø32	PS-MCDA-32

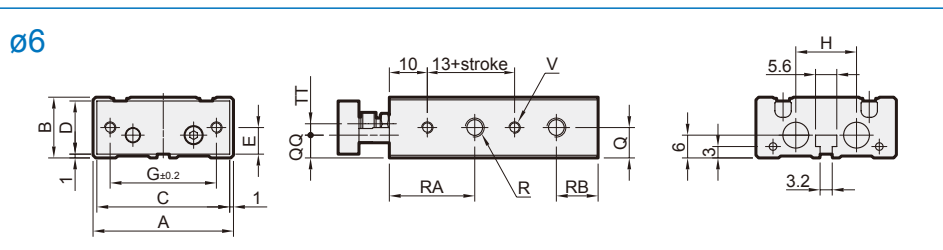
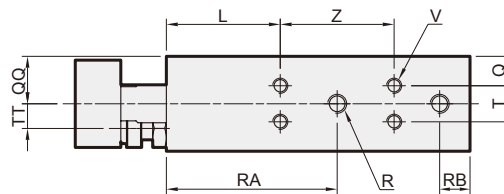
DUAL-ROD CYLINDER



$\phi 12, \phi 16$



$\phi 20 \sim \phi 32$



MCDA-03/MCDA-23

Code Tube I.D.	A	B	C	D	E	F (Thru)	G	H	I	J	K	L	M (Both side)	N (Both side)	O	Q	QQ	R (Both side)	RA	RB	S	T
6	37	16	35	14	7	2-M3×0.5	28	16	2.75	5.5	8	13	2- $\phi 6.5 \times 3.3dp$ *1	2-M3×0.5 thru	4	8	6	4-M5×0.8	22.5	11	45	-
12	46	18	44	16	8	2-M4×0.7	35	19	4	8	9	20	4- $\phi 6.5 \times 3.3dp$	4-M3×0.5×5dp	6	9	10	4-M5×0.8	30	8	55	-
16	58	20	56	18	9	2-M5×0.8	45	25	5	10	9	30	4- $\phi 8 \times 4.4dp$	4-M4×0.7×6dp	8	10	10	4-M5×0.8	38.5	8	60	-
20	64	25	62	23	11.5	2-M5×0.8	50	28	6	12	12	30	4- $\phi 9.5 \times 5.3dp$	4-M4×0.7×6dp	10	7.75	12.5	4-M5×0.8	45	8	70	9.5
25	80	30	78	28	14	2-M6×1.0	60	35	6	12	12	30	4- $\phi 11 \times 6.3dp$	4-M5×0.8×8dp	12	8.5	15	4-Rc1/8	46	9	72	13
32	98	38	96	36	18	2-M6×1.0	75	44	8	16	14	30	4- $\phi 11 \times 6.3dp$	4-M5×0.8×8dp	16	9	19	4-Rc1/8	56	10	82	20

Code Tube I.D.	TT	V (Both side)	W (Thru)	Z (Stroke)							ZZ
				10,15,20,25	30,35,40,45,50	60,70,75,80	90,100	110,120,125	150	175,200	
6	3	4-M3×0.5×4.5dp	2- $\phi 3.4$	10+1/2 stroke *2							58.5
12	3.5	4-M3×0.5×4.5dp	2-M4×0.7	30	40	50	60	70	80	-	72
16	5	4-M4×0.7×5dp	2-M5×0.8	25	35	45	55	65	75	-	79
20	6.5	8-M4×0.7×5.5dp	2-M6×1.0	30	40	60	-				94
25	9	8-M5×0.8×7.5dp	2-M8×1.25	30	40	60	80		100	96	
32	11.5	8-M5×0.8×7.5dp	2-M8×1.25	40	50	70	-				112

*1. $\phi 6$ - single side.
*2. $\phi 6$ - stroke (10, 20, 30, 40, 50)