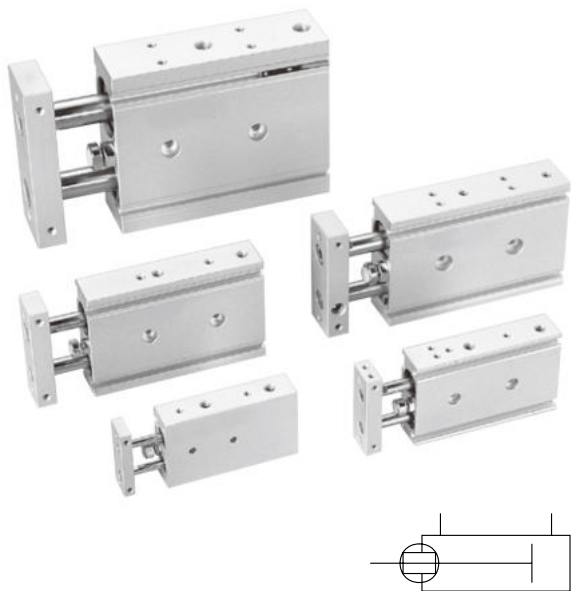


DUAL-ROD CYLINDER



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

MCDA - 03 - 12 - 50 - □

MODEL

TUBE I.D.

TYPE OF BEARING

03	Slide bush
23	Linear bearing

STROKE

PORT THREAD
Blank: M5×0.8
(for ø6~ø20)
Blank: Rc thread
G: G thread
NPT: NPT thread
(for ø25, ø32)

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	10,15,20,25,30,35,40,45,50,60,70,75,80,90,100,110,120,125,150,175,200
ø25	
ø32	

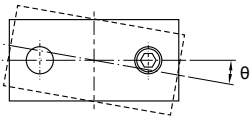
- Stroke out of specification is also available.
- Please consult us if stroke out of specification.
- It is possible to adjust length of basic stroke by 0~5mm.

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

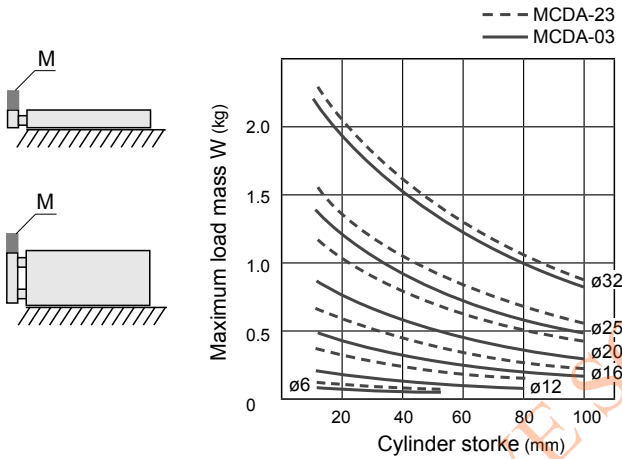
Anti-roll accuracy



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

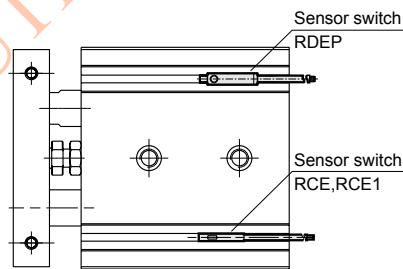
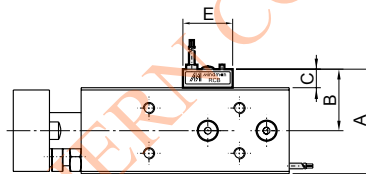
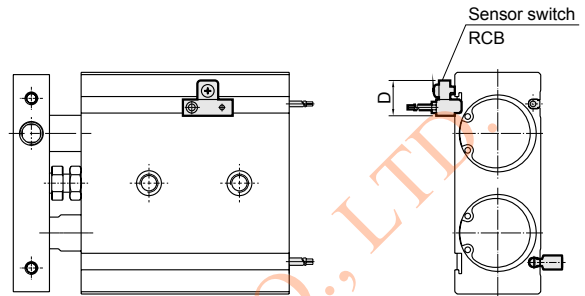
Maximum load mass

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

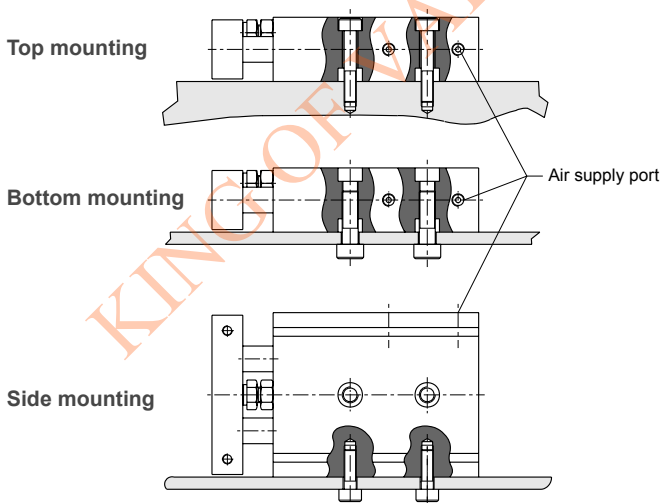


Installation of sensor switch

Sensor switch: RCB, RCE, RCE1, RDEP

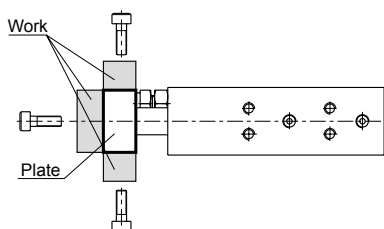


Mounting methods



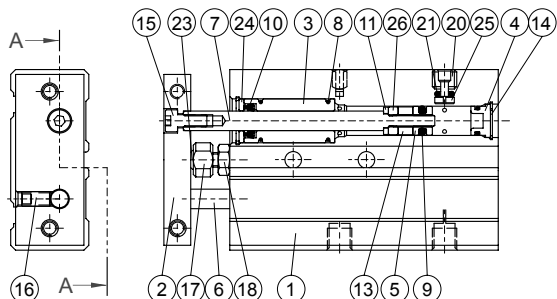
Code Tube I.D.	A	B	C	D	E
12	26.5	17.5	8.5	16	22
16	28.5	18.5	8.5	16	22
20	33.5	21	8.5	16	22
25	38.5	23.5	8.5	16	22
32	46.5	27.5	8.5	16	22

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

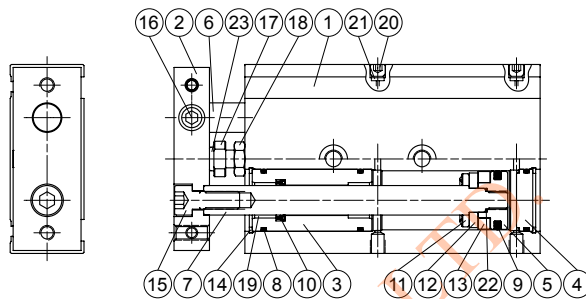


DUAL-ROD CYLINDER

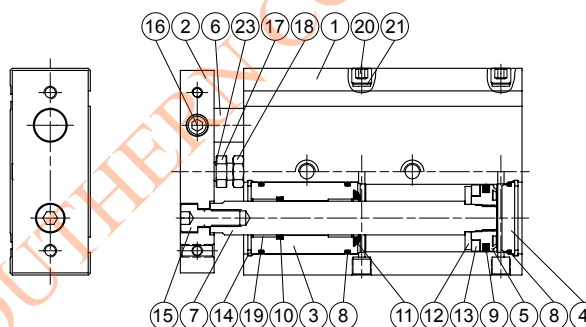
ø6



ø12~ø20



ø25,ø32



Material

No.	Part name	Tube I.D.	6	12	16	20	25	32	Note	Q'y	Repair kits (inclusion)	
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	

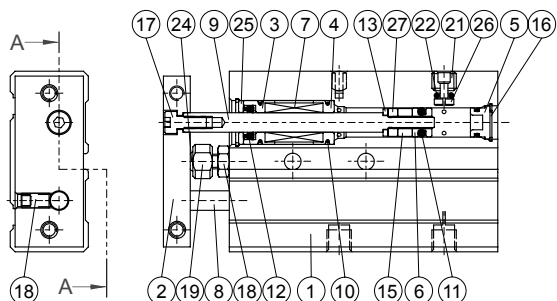
* Carbon steel

Order example of repair kits

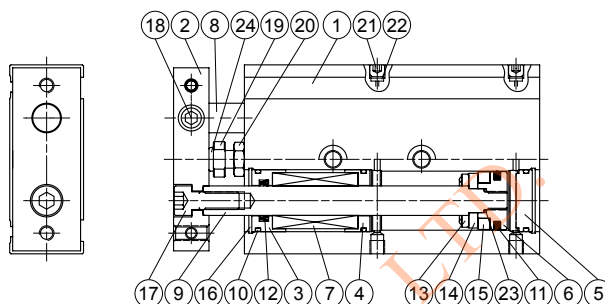
Tube I.D.	Repair kits
ø6	PS-MCDA-6
ø12	PS-MCDA-12
ø16	PS-MCDA-16
ø20	PS-MCDA-20
ø25	PS-MCDA-25
ø32	PS-MCDA-32

DUAL-ROD CYLINDER

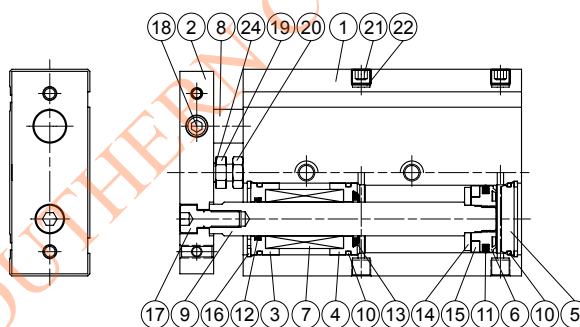
ø6



ø12~ø20



ø25,ø32



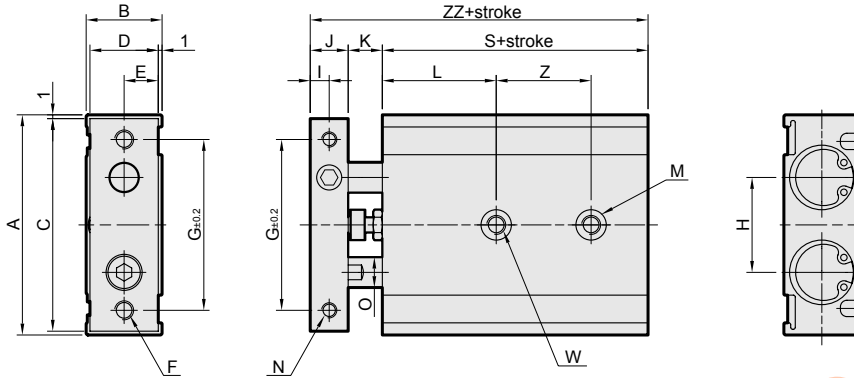
Material

No.	Part name	Tube I.D.	6	12	16	20	25	32	Note	Q'y	Repair kits (inclusion)
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	

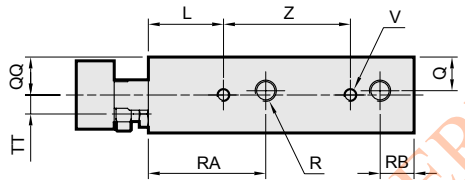
Order example of repair kits

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

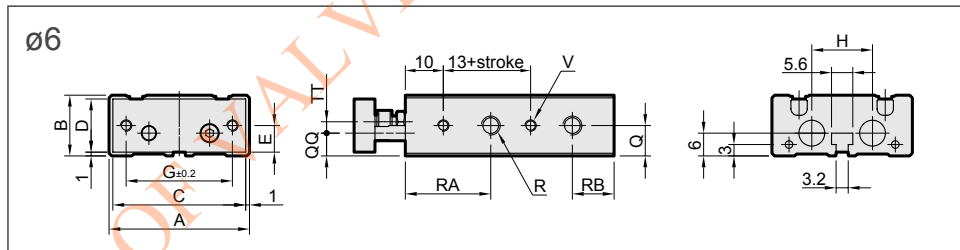
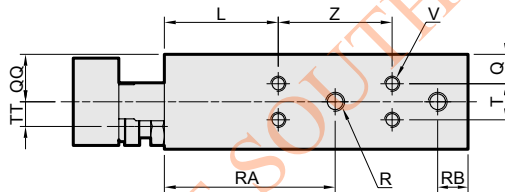
DUAL-ROD CYLINDER



$\phi 12, \phi 16$



$\phi 20 \sim \phi 32$



MCDA-03 / 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		80	100	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		90	110	112	

*1. $\phi 6$ - single side.

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