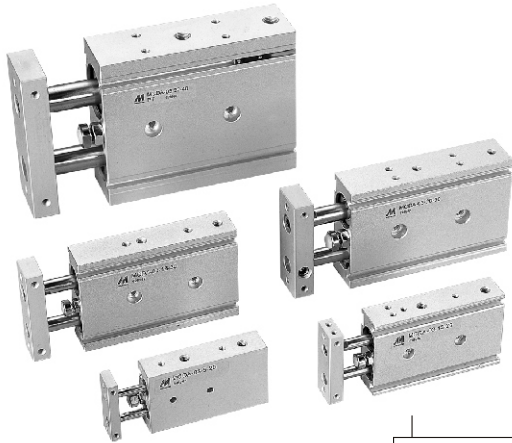


MCDA series

DUAL-ROD CYLINDER



Order example:

MCDA — 03 — 12 — 50 — BSP

MODEL

TUBE I.D.

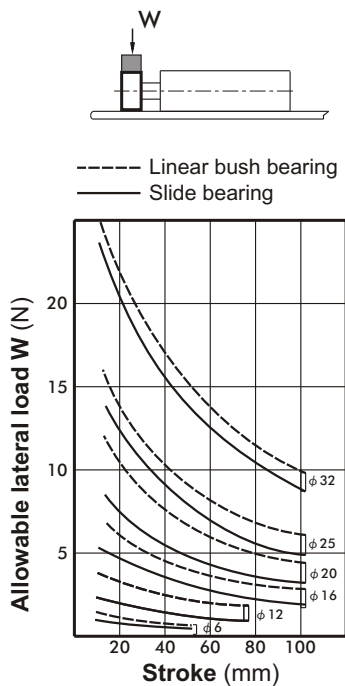
STROKE

TYPE OF BEARING

03	Slide bearing
23	Linear bush bearing

PORT THREAD
Blank: PT thread
BSP: BSP thread
NPT: NPT thread

Allowable lateral load



Features:

- A thin and compact dual rod cylinder unit with high precision guiding for picking and placing
- Standardization of high lateral load resistance and highly accurate slide bearing & linear bush bearing.
- High Anti-roll accuracy & double thrust

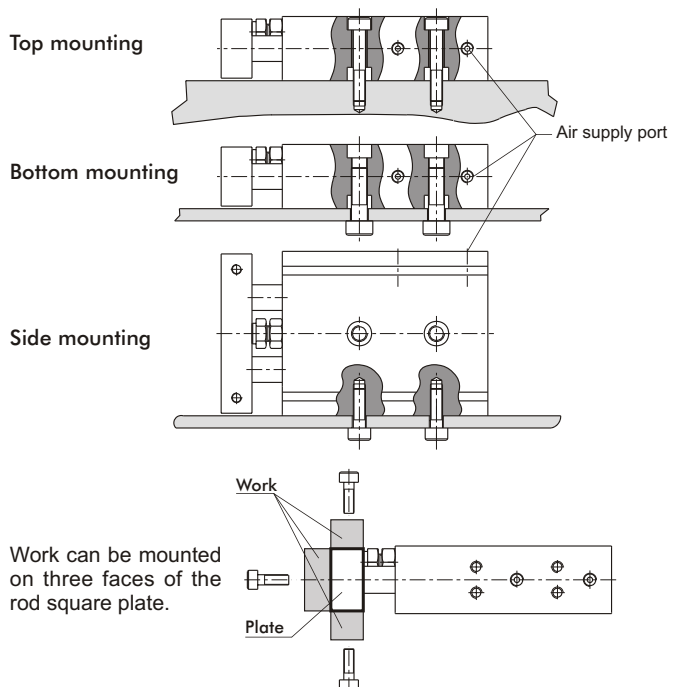
Specification:

Model	MCDA					
Acting type	Double acting					
Tube I.D.(mm)	6	12	16	20	25	32
Port size Rc(PT)	M5 × 0.8			PT 1/8		
Medium	Air					
Operating pressure range kgf/cm ²	Max.	7				
	Min.	1.5	1.0	0.5		
Proof pressure	10 kgf/cm ²					
Ambient temperature	-5~+60°C (No freezing)					
Lubrication	Not required (If lubrication is used, apply turbine oil NO1 ISO VG32)					
Cushion	With rubber cushion pad (both side)					
Magnet	With magnet					
Sensor switch	RCE / E1	RCB, RCE, RCE1				

Table for standard stroke

Tube I.D.	Stroke (mm)
φ 6	10,20,30
φ 12	10, 15,20,25,30,35,40,45,50,60,70,75
φ 16, 20, 25, 32	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.



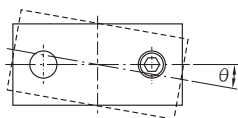
Work can be mounted on three faces of the rod square plate.

MCDA Capacity / Installation of sensor switch $\phi 6 \sim \phi 32$



DUAL-ROD CYLINDER

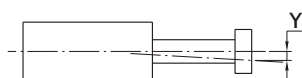
Anti-roll accuracy :



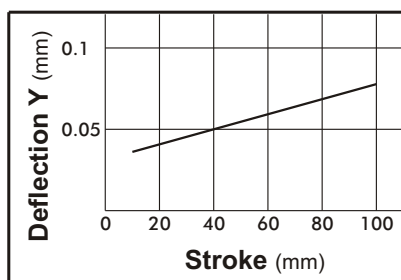
Tube I.D.	$\phi 6 \sim \phi 32$
MCDA-03	$\pm 0.1^\circ$
MCDA-23	$\pm 0.1^\circ$

Capacity for the use as a pusher~

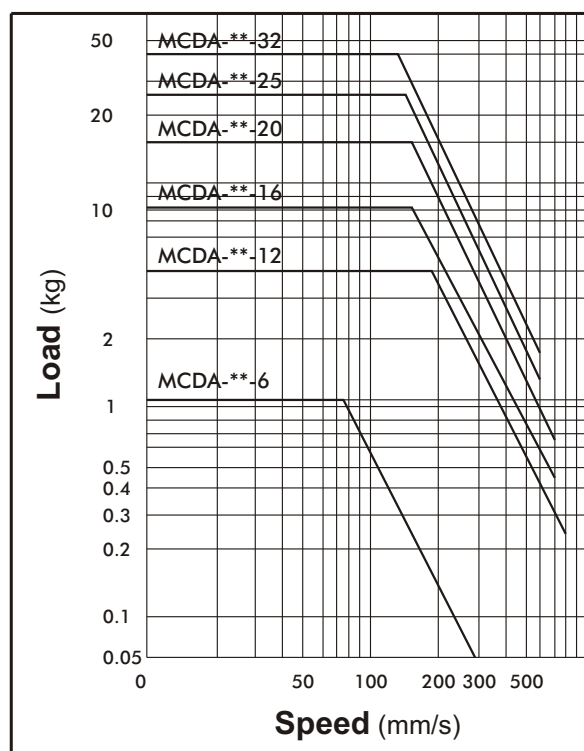
MCDA-02/23, deflection and allowable top load.



- In the actual operation, load at the top should be below the allowable top load.
- Y → Deflection

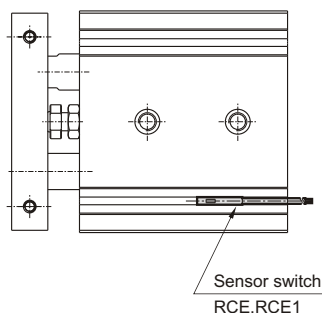
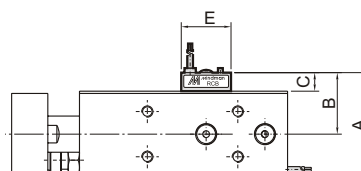
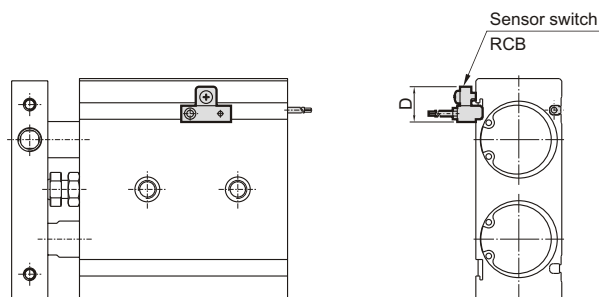


Capacity graph



Installation of sensor switch

Sensor switch: RCB, RCE, RCE1



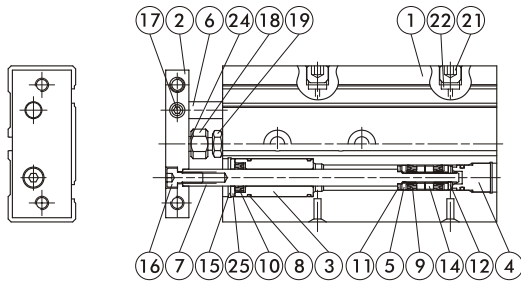
Code Tube I.D.	A	B	C	D	E
12	26.5	17.5	8.5	16	22
16	28.5	18.5	8.5	16	22
20	33.5	21	8.5	16	22
25	38.5	23.5	8.5	16	22
32	46.5	27.5	8.5	16	22

MCDA-03 Inside structure & Parts list

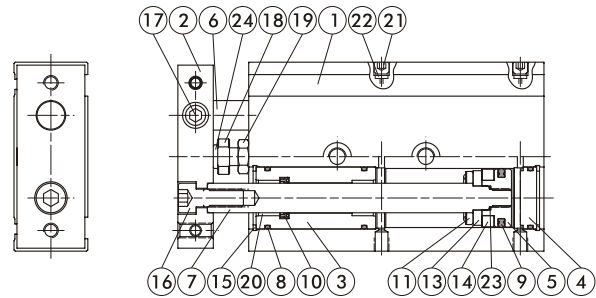
DUAL-ROD CYLINDER



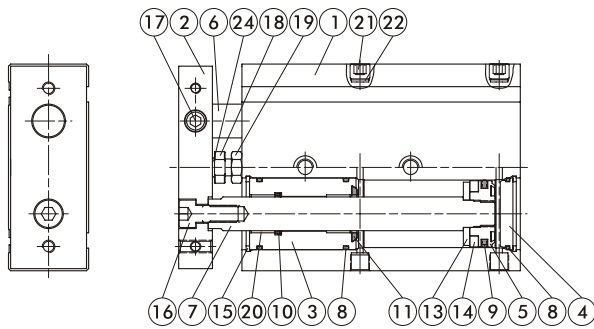
$\phi 6$



$\phi 12 \sim \phi 20$



$\phi 25, \phi 32$



Material

No.	Part name	Tube I.D.	6	12	16	20	25	32	Note
1	Body		Aluminum alloy						
2	Plate		Aluminum alloy						
3	Rod cover		※1	Aluminum alloy					
4	End cover		Aluminum alloy						
5	Piston		Aluminum alloy						
6	Piston rod #1		Stainless steel	※2					
7	Piston rod #2		Stainless steel	※2					
8	Cover ring		NBR						
9	Piston packing		NBR						
10	Rod packing		NBR						
11	Rod cushion		NBR						
12	End cushion		NBR						only $\phi 6$
13	Magnet holder		Stainless steel						

No.	Part name	Tube I.D.	6	12	16	20	25	32	Note
14	Magnet ring		Magnet material						
15	Snap ring		Spring steel						
16	Screw		Stainless steel						
17	Set screw		Stainless steel						
18	Cushion screw		Copper alloy						
19	Nut		Carbon steel						
20	Rod bush		Copper alloy						
21	Plug(set screw)		Carbon steel						
22	Plug ring		NBR						
23	O-ring		NBR						only $\phi 20$
24	Bumper		Polyurethane						
25	Rod cover washer		Stainless steel						only $\phi 6$

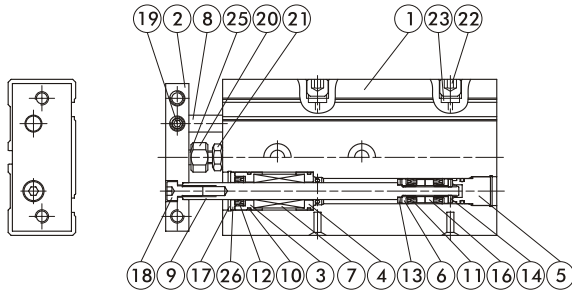
※ 1 : Copper alloy
 ※ 2 : Carbon steel

MCDA-23 Inside structure & Parts list

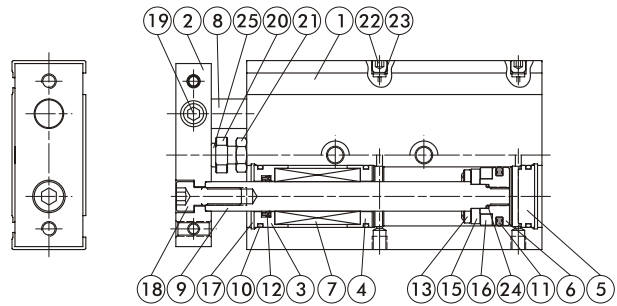
DUAL-ROD CYLINDER



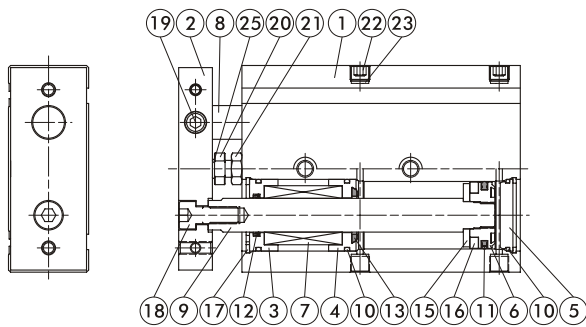
$\phi 6$



$\phi 12 \sim \phi 20$



$\phi 25, \phi 32$



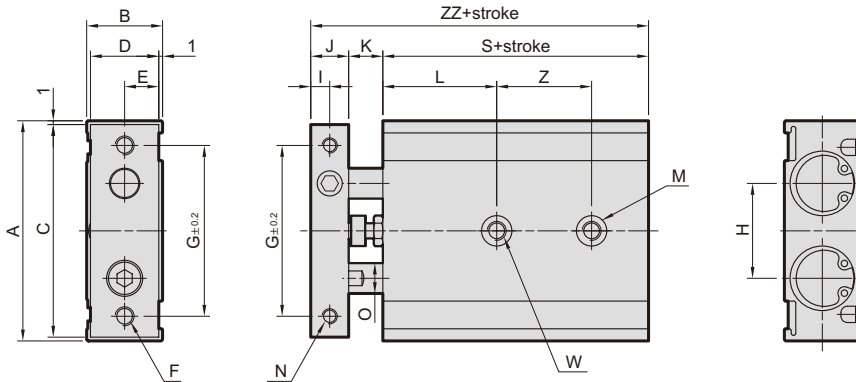
Material

No.	Part name	Tube I.D.	6	12	16	20	25	32	Note
1	Body		Aluminum alloy						
2	Plate		Aluminum alloy						
3	Rod cover #1		Aluminum alloy						
4	Rod cover #2		Aluminum alloy						
5	End cover		Aluminum alloy						
6	Piston		Aluminum alloy						
7	Slide bush		—						
8	Piston rod #1		Bearing steel						
9	Piston rod #2		Bearing steel						
10	Cover ring		NBR						
11	Piston packing		NBR						
12	Rod packing		NBR						
13	Rod cushion		NBR						

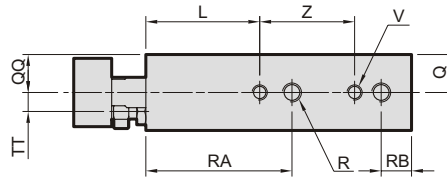
No.	Part name	Tube I.D.	6	12	16	20	25	32	Note
14	End cushion		NBR						only $\phi 6$
15	Magnet holder		Stainless steel						
16	Magnet ring		Magnet material						
17	Snap ring		Spring steel						
18	Screw		Stainless steel						
19	Set screw		Stainless steel						
20	Cushion screw		Copper alloy						
21	Nut		Carbon steel						
22	Plug(set screw)		Carbon steel						
23	Plug ring		NBR						
24	O-ring		NBR						only $\phi 20$
25	Bumper		Polyurethane						
26	Rod cover washer		Stainless steel						only $\phi 6$

MCDA Dimensions $\phi 6 \sim \phi 32$

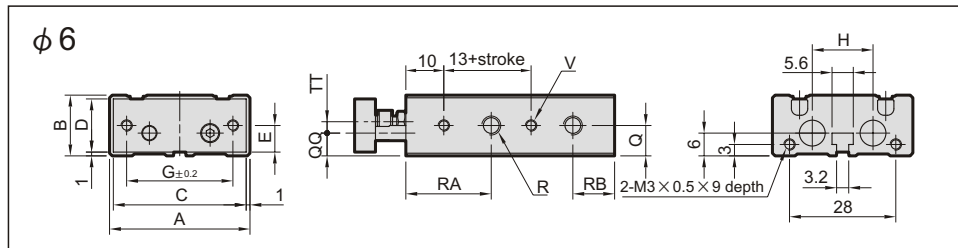
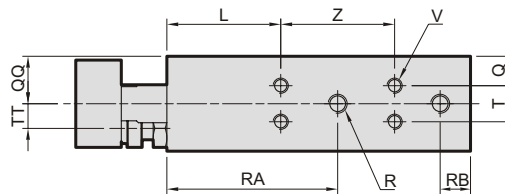
DUAL-ROD CYLINDER



$\phi 12, \phi 16$



$\phi 20 \sim \phi 32$



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-PT 1/8	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-PT 1/8	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	
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		72
16	5	4-M4×0.7×5dp	2-M5×0.8	25	35	45	55	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		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)