

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 | | | | |
| | 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

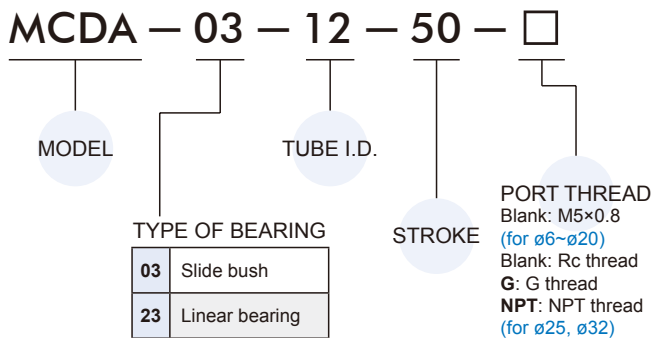
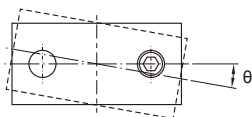


Table for standard stroke

| Tube I.D. | Stroke (mm) | Max. stroke |
|-----------|---|-------------|
| ø6 | 10,20,30 | 50 |
| ø12 | 10,15,20,25,30,35,40,45,50,60,70 | 70 |
| ø16 | 10,15,20,25,30,35,40,45,50,60,70, 75,80,90,100 | 120 |
| ø20 | | 130 |
| ø25 | | 150 |
| ø32 | | 150 |

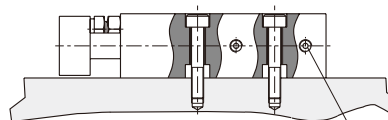
- Stroke out of specification is also available.
- Please consult us if stroke out of specification.
- It is possible to adjust length of basic stroke by 0~5mm.

Anti-roll accuracy

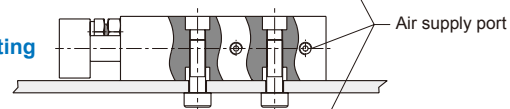


| Code Type | θ |
|-----------|------------------|
| MCDA-03 | $\pm 0.1^\circ$ |
| MCDA-23 | $\pm 0.15^\circ$ |

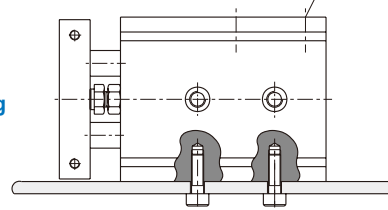
Top mounting



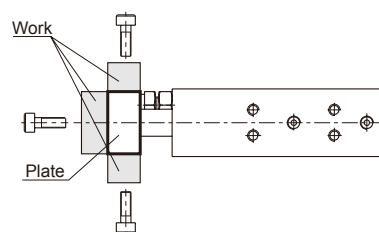
Bottom mounting



Side mounting

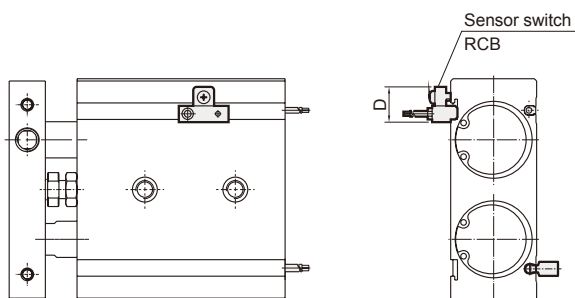


Work can be mounted on three faces of the rod square plate.

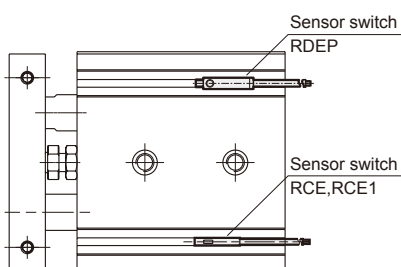
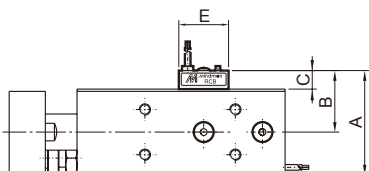


Installation of sensor switch

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 |

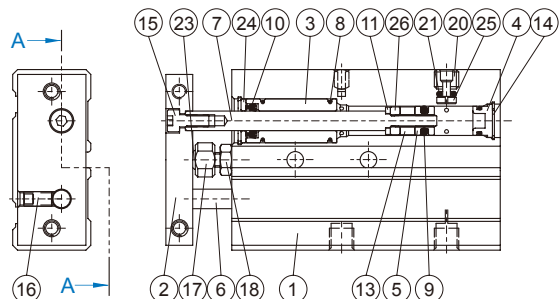


MCDA-03 Inside structure & Parts list

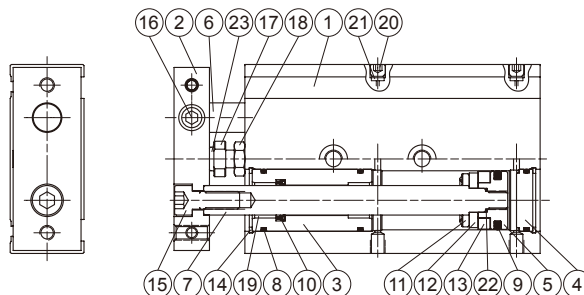
DUAL-ROD CYLINDER



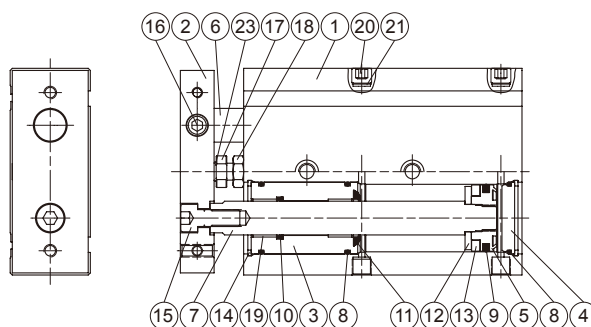
ø6



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

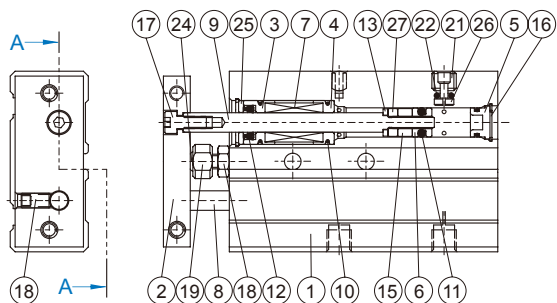
| Tube I.D. | Repair kits |
|-----------|-------------|
| ø6 | PS-MCDA-6 |
| ø12 | PS-MCDA-12 |
| ø16 | PS-MCDA-16 |
| ø20 | PS-MCDA-20 |
| ø25 | PS-MCDA-25 |
| ø32 | PS-MCDA-32 |

MCDA-23 Inside structure & Parts list

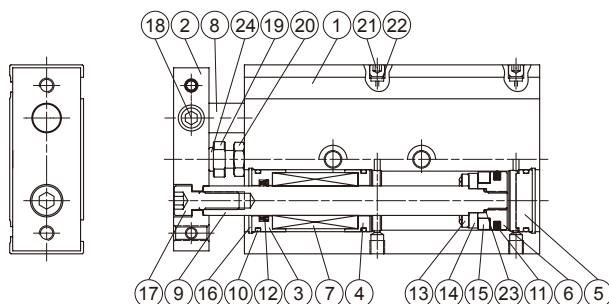
DUAL-ROD CYLINDER



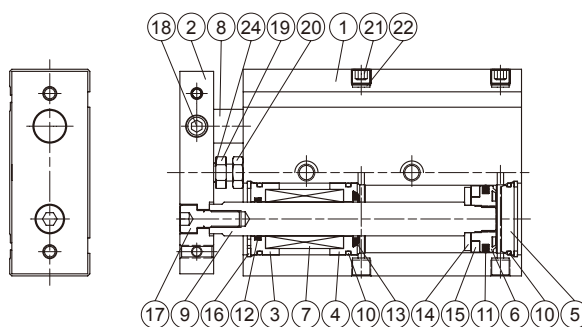
ø6



ø12~ø20



ø25,ø32



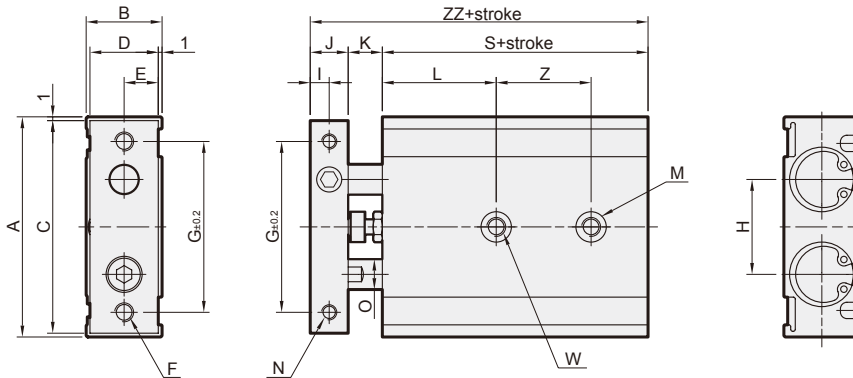
Material

| 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 | |

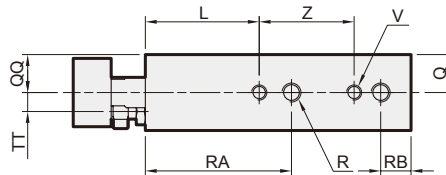
Order example of repair kits

| 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 |

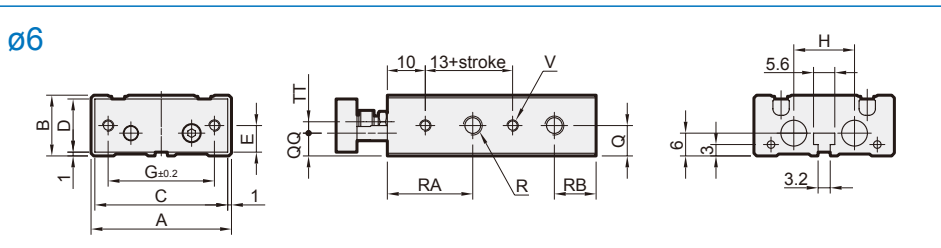
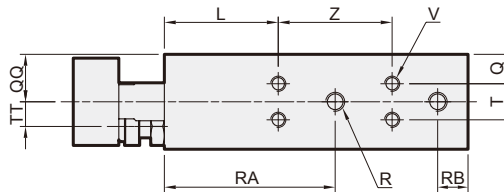
DUAL-ROD CYLINDER



$\phi 12, \phi 16$



$\phi 20 \sim \phi 32$



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 | |
| 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 |
| 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)