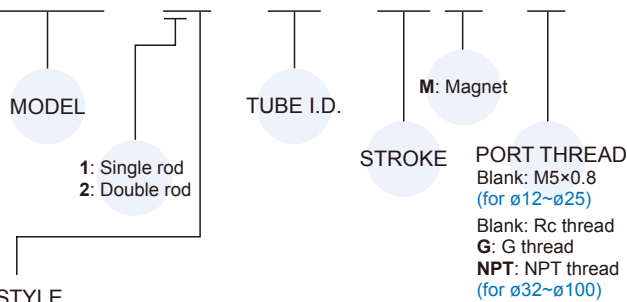


### Order example

MCJA – 12 – 40 – 25 M – □



### STYLE

| Code | Symbol | Description                                     |
|------|--------|-------------------------------------------------|
| 1 1  |        | Double acting / Male thread                     |
| 1 2  |        | Double acting / Female thread                   |
| 1 3  |        | Single acting / Normally extended male thread   |
| 1 4  |        | Single acting / Normally extended female thread |
| 1 5  |        | Single acting / Normally returned male thread   |
| 1 6  |        | Single acting / Normally returned female thread |
| 2 1  |        | Double rod / Male thread                        |
| 2 2  |        | Double rod / Female thread                      |
| 2 7  |        | Double rod / Adjustable male thread             |
| 2 8  |        | Double rod / Adjustable female thread           |

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

### Features

- Ultra Compact, light weight and space saving cylinder.
- Wide range of bore sizes and strokes (12mm~100mm).
- Single and double acting available.
- Ideal for use in machinery where space is limited and incorporating sensor groove which enables flush fitting of sensors.

### Specification

| Model                          | MCJA                          |    |        |               |        |       |    |    |    |     |
|--------------------------------|-------------------------------|----|--------|---------------|--------|-------|----|----|----|-----|
| Acting type                    | Double acting / Single acting |    |        | Double acting |        |       |    |    |    |     |
| Tube I.D. (mm)                 | 12                            | 16 | 20     | 25            | 32     | 40    | 50 | 63 | 80 | 100 |
| Port size                      | M5×0.8                        |    |        | Rc1/8         | Rc1/4  | Rc3/8 |    |    |    |     |
| Medium                         | Air                           |    |        |               |        |       |    |    |    |     |
| Operating pressure range (MPa) | Double acting                 |    | 0.05~1 | 0.03~1        | 0.02~1 |       |    |    |    |     |
|                                | Single acting                 |    | 0.2~1  | 0.15~1        | 0.1~1  | —     |    |    |    |     |
| Proof pressure                 | 1.5 MPa                       |    |        |               |        |       |    |    |    |     |
| Ambient temperature            | -5°C~+60°C (No freezing)      |    |        |               |        |       |    |    |    |     |
| Available speed range          | 50~500 mm/sec                 |    |        |               |        |       |    |    |    |     |
| Sensor switch (*)              | RCB, RCE, RCE1, RDEP          |    |        |               |        |       |    |    |    |     |

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

### Double acting – Table for standard stroke

| Tube I.D.  |                           | Stroke (mm)                  | Max. stroke |
|------------|---------------------------|------------------------------|-------------|
| Single rod | ø12,16                    | 5,10,15,20,25,30             | 300         |
|            | ø20,25,32<br>ø40,50,63    | 5,10,15,20,25,30,35,40,45,50 | 300         |
|            | ø80,100                   | 5,10,15,20,25,30,35,40,45,50 | 125         |
| Double rod | ø12,16                    | 5,10,15,20,25,30             | 300         |
|            | ø20,25,32<br>ø40,50,63,80 | 5,10,15,20,25,30,35,40,45,50 | 300         |
|            | ø100                      | 5,10,15,20,25,30,35,40,45,50 | 125         |

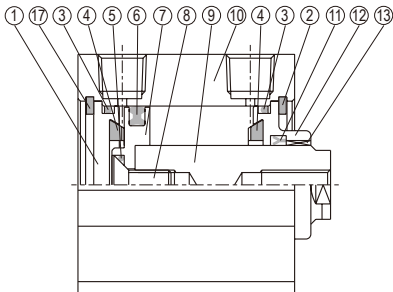
- Stroke out of specification is also available
- Please consult us if stroke out of specification.

### Single acting – Table for standard stroke

| Tube I.D.          | Stroke (mm)      |
|--------------------|------------------|
| ø12,16,20,25,32,40 | 5,10,15,20,25,30 |
| ø50                | 5,10,15,20       |

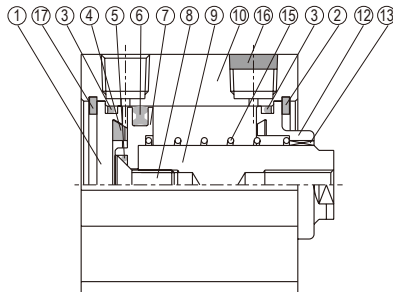
- Stroke out of specification is also available
- Please consult us if stroke out of specification.

### Double acting



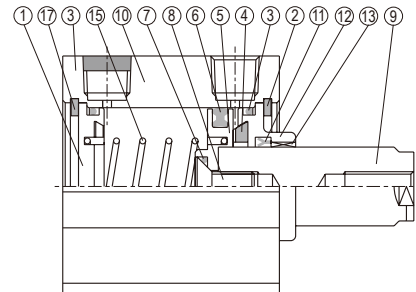
### Single acting

#### Normally returned



### Single acting

#### Normally extended

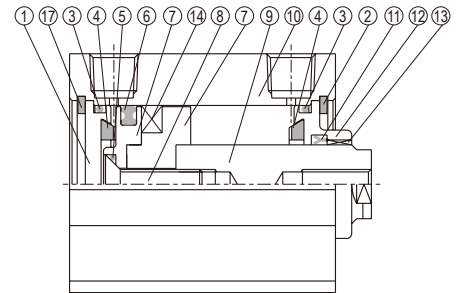


### Seal kit

| Acting type | Rod packing                     |                   | Piston packing |               | Cover ring                  | Piston gasket               |
|-------------|---------------------------------|-------------------|----------------|---------------|-----------------------------|-----------------------------|
|             | Double action normally extended | Normally returned | Double acting  | Single acting | Double acting single acting | Double acting single acting |
| Q'y         | 1                               | 0                 | 1              | 1             | 2                           | 1                           |
| ø12         | KSYR-6                          | —                 | OPA-12         | OPA-12        | S-12                        | d4×w1                       |
| ø16         | KSYR-6                          | —                 | OPA-16         | OPA-16        | S-14                        | d4×w1                       |
| ø20         | KSYR-8                          | —                 | OPA-20         | OPA-20        | S-18                        | d6×w1                       |
| ø25         | KSYR-10                         | —                 | OPA-25         | OPA-25        | S-22                        | d8×w1                       |
| ø32         | KSYR-12                         | —                 | OPA-32         | OPA-32        | d28×w2                      | S-9                         |
| ø40         | KSYR-16                         | —                 | OPA-40         | OPA-40        | S-36                        | S-9                         |
| ø50         | KSYR-20                         | —                 | OPA-50         | OPA-50        | AS-31                       | S-16                        |
| ø63         | KSYR-20                         | —                 | OPA-63         | —             | AS-35                       | S-16                        |
| ø80         | ORA-25                          | —                 | OPA-80         | —             | AS-41                       | d20×w1                      |
| ø100        | SDR-30                          | —                 | OPA-100        | —             | S-95                        | S-26                        |

### Double acting

#### (with magnet)



### Order example Component parts

| Tube I.D. | Component parts |
|-----------|-----------------|
| ø12       | CP-MCJA-12(M)   |
| ø16       | CP-MCJA-16(M)   |
| ø20       | CP-MCJA-20(M)   |
| ø25       | CP-MCJA-25(M)   |
| ø32       | CP-MCJA-32(M)   |
| ø40       | CP-MCJA-40(M)   |
| ø50       | CP-MCJA-50(M)   |
| ø63       | CP-MCJA-63(M)   |
| ø80       | CP-MCJA-80(M)   |
| ø100      | CP-MCJA-100(M)  |

M: With magnet

### Material

| No. | Tube I.D. Part name   | 12              | 16              | 20           | 25           | 32 | 40 | 50 | 63 | 80 | 100 | Q'y | Component parts (inclusion) | Repair kits (inclusion) |
|-----|-----------------------|-----------------|-----------------|--------------|--------------|----|----|----|----|----|-----|-----|-----------------------------|-------------------------|
| 1   | Head cover            | Aluminum alloy  |                 |              |              |    |    |    |    |    |     | 1   | ●                           |                         |
| 2   | Snap ring (Front end) | SUS             | spring steel    | SUS          | Spring steel |    |    |    |    |    |     | 1   | ●                           |                         |
| 3   | Cover ring            | NBR             |                 |              |              |    |    |    |    |    |     | 2   | ●                           | ●                       |
| 4   | Cushion packing       | —               | NBR             |              |              |    |    |    |    |    |     | 2   | ●                           | ●                       |
| 5   | Piston gasket         | NBR             |                 |              |              |    |    |    |    |    |     | 1   | ●                           | ●                       |
| 6   | Piston packing        | NBR             |                 |              |              |    |    |    |    |    |     | 1   | ●                           | ●                       |
| 7   | Piston                | Aluminum alloy  |                 |              |              |    |    |    |    |    |     | 1   | ●                           |                         |
| 8   | Screw                 | With magnet     | Stainless steel |              | SCM          |    |    |    |    |    | 1   | ●   |                             |                         |
|     |                       | Without magnet  | SCM             | SUS          | SCM          |    |    |    |    |    | 1   | ●   |                             |                         |
| 9   | Piston rod *1         | With magnet     | Stainless steel |              | Carbon steel |    |    |    |    |    | 1   |     |                             |                         |
|     |                       | Without magnet  | SUS             | Carbon steel |              |    |    |    |    | 1  |     |     |                             |                         |
| 10  | Body                  | Aluminum alloy  |                 |              |              |    |    |    |    |    |     | 1   |                             |                         |
| 11  | Rod packing           | NBR             |                 |              |              |    |    |    |    |    |     | 1*2 | ●                           | ●                       |
| 12  | Rod cover             | Aluminum alloy  |                 |              |              |    |    |    |    |    |     | 1   | ●                           |                         |
| 13  | Bush                  | —               | Bearing alloy   |              |              |    |    |    |    |    |     | 1   | ●                           |                         |
| 14  | Magnet ring           | Magnet material |                 |              |              |    |    |    |    |    |     | 1   | ●                           |                         |
| 15  | Spring                | SWP             |                 | —            |              |    |    |    |    | 1  | ●   |     |                             |                         |
| 16  | Silencer              | Brass           |                 |              |              |    |    |    |    |    |     | 1   | ●                           |                         |
| 17  | Snap ring (Rear end)  | Stainless steel |                 | Spring steel |              |    |    |    |    | 1  | ●   |     |                             |                         |

\*1. When customized material is bearing steel, only two-side across flat (wrench flat) is available.

\*2. Single acting / Normally returned, Q'y=0.

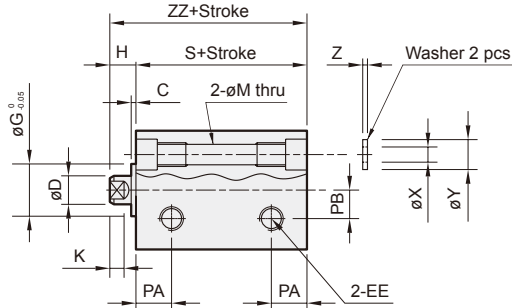
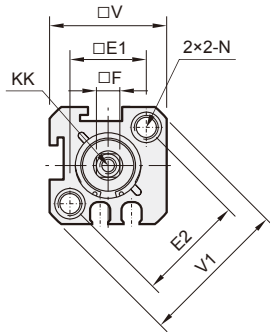
### Repair kits

| Tube I.D. | Repair kits |
|-----------|-------------|
| ø12       | PS-MCJA-12  |
| ø16       | PS-MCJA-16  |
| ø20       | PS-MCJA-20  |
| ø25       | PS-MCJA-25  |
| ø32       | PS-MCJA-32  |
| ø40       | PS-MCJA-40  |
| ø50       | PS-MCJA-50  |
| ø63       | PS-MCJA-63  |
| ø80       | PS-MCJA-80  |
| ø100      | PS-MCJA-100 |

## COMPACT CYLINDER

mindman

$\phi 12, \phi 16$



Long stroke

Without counter bore

With magnet type:  
The stroke length must be over 100mm.  
Without magnet type:  
The stroke length must be over 110mm.

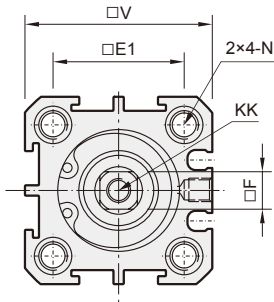
$\phi 12, \phi 16$



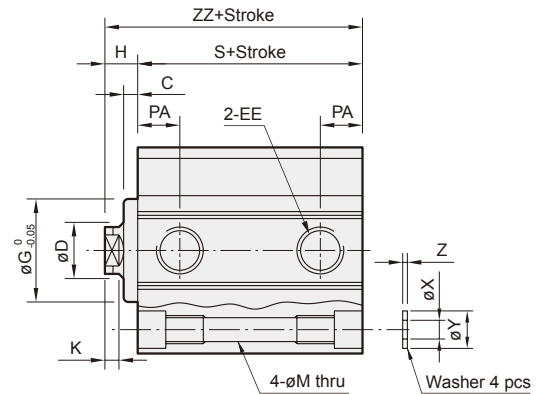
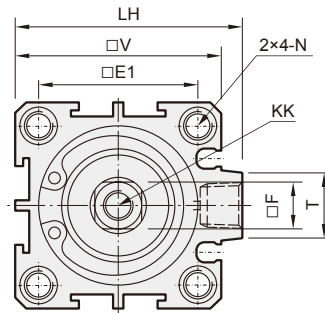
$\phi 20\sim\phi 100$



$\phi 20, \phi 25$



$\phi 32\sim\phi 100$



| Code<br>Tube I.D. | C   | D  | EE         | E1   | E2 | F  | G  | H   | K | KK              | LH   | M    | N                               | PA  | PB  |
|-------------------|-----|----|------------|------|----|----|----|-----|---|-----------------|------|------|---------------------------------|-----|-----|
| 12                | 1   | 6  | M5×0.8     | 16.3 | 23 | 5  | 11 | 5   | 3 | M3×0.5×6depth   | —    | 4.3  | ø6.5×4.5depth, M5×0.8×7.5depth  | 6.5 | 6   |
| 16                | 1.5 | 6  | M5×0.8     | 19.8 | 28 | 5  | 11 | 5.5 | 3 | M3×0.5×6depth   | —    | 4.3  | ø6.5×4.5depth, M5×0.8×7.5depth  | 7   | 6.5 |
| 20                | 1.5 | 8  | M5×0.8     | 24   | —  | 6  | 15 | 5.5 | 3 | M4×0.7×8depth   | —    | 4.3  | ø6.5×4.5depth, M5×0.8×7.5depth  | 7.5 | —   |
| 25                | 2   | 10 | M5×0.8     | 28   | —  | 8  | 17 | 6   | 3 | M5×0.8×10depth  | —    | 5.1  | ø9×7depth, M6×1.0×10depth       | 8   | —   |
| 32                | 3   | 12 | Rc1/8 (*1) | 34   | —  | 10 | 22 | 7   | 3 | M6×1.0×12depth  | 48.5 | 5.1  | ø9×7depth, M6×1.0×10depth       | 9   | —   |
| 40                | 3   | 16 | Rc1/8 (*1) | 40   | —  | 14 | 28 | 7   | 3 | M8×1.25×12depth | 56.5 | 6.9  | ø10.5×8depth, M8×1.25×12depth   | 10  | —   |
| 50                | 4   | 20 | Rc1/4 (*2) | 48   | —  | 17 | 38 | 9   | 3 | M10×1.5×15depth | 70   | 6.9  | ø11×8.5depth, M8×1.25×16.5depth | 10  | —   |
| 63                | 4   | 20 | Rc1/4 (*2) | 60   | —  | 17 | 40 | 9   | 3 | M10×1.5×15depth | 83   | 6.9  | ø11×8.5depth, M8×1.25×16.5depth | 12  | —   |
| 80                | 5   | 25 | Rc3/8 (*3) | 74   | —  | 22 | 45 | 11  | 4 | M14×1.5×20depth | 102  | 10.5 | ø14×10.5depth, M12×1.75×12depth | 13  | —   |
| 100               | 5   | 30 | Rc3/8 (*3) | 90   | —  | 27 | 55 | 12  | 4 | M18×1.5×20depth | 122  | 12.3 | ø18.5×13depth, M14×2×17depth    | 17  | —   |

\*1. Without magnet with stroke=5mm, EE=M5×0.8

\*2. Without magnet with stroke=5mm, EE=Rc1/8

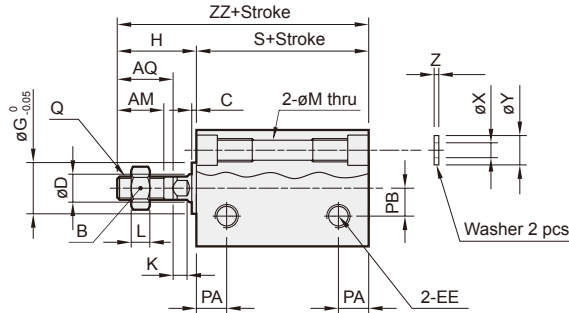
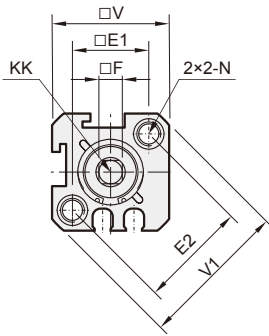
\*3. Without magnet with stroke=5mm, EE=Rc1/4

| Code<br>Tube I.D. | T  | V   | V1 | X    | Y    | Z   | Without magnet |      | Magnet |      |
|-------------------|----|-----|----|------|------|-----|----------------|------|--------|------|
|                   |    |     |    |      |      |     | S              | ZZ   | S      | ZZ   |
| 12                | —  | 25  | 32 | 3.2  | 6.3  | 1   | 17             | 22   | 27     | 32   |
| 16                | —  | 29  | 38 | 3.2  | 6.3  | 1   | 18.5           | 24   | 28.5   | 34   |
| 20                | —  | 34  | —  | 3.2  | 6.3  | 1   | 19.5           | 25   | 29.5   | 35   |
| 25                | —  | 40  | —  | 4.2  | 7.8  | 1   | 21             | 27   | 31     | 37   |
| 32                | 14 | 44  | —  | 4.2  | 7.8  | 1   | 24.5           | 31.5 | 34.5   | 41.5 |
| 40                | 14 | 52  | —  | 6.2  | 10.3 | 1.6 | 26             | 33   | 36     | 43   |
| 50                | 19 | 62  | —  | 6.2  | 10.8 | 1.6 | 28             | 37   | 38     | 47   |
| 63                | 20 | 75  | —  | 6.2  | 10.8 | 1.6 | 32             | 41   | 42     | 51   |
| 80                | 27 | 94  | —  | 8.2  | 13.8 | 1.6 | 41             | 52   | 51     | 62   |
| 100               | 26 | 114 | —  | 10.2 | 17.3 | 2   | 51             | 63   | 61     | 73   |

## COMPACT CYLINDER

mindman

### $\phi 12, \phi 16$



### Long stroke

#### Without counter bore

With magnet type:  
The stroke length must be over 100mm.  
Without magnet type:  
The stroke length must be over 110mm.

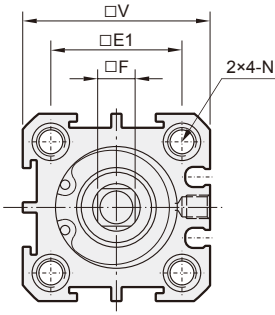
### $\phi 12, \phi 16$



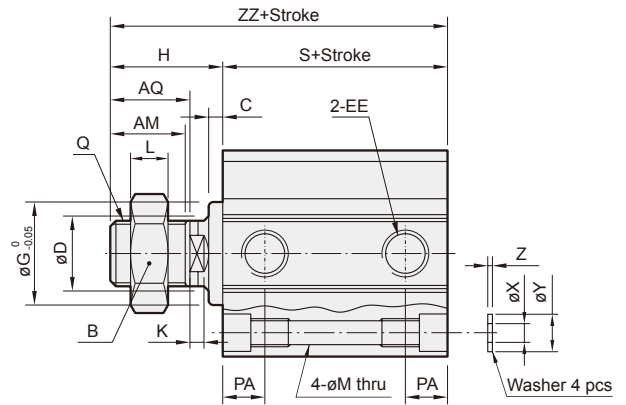
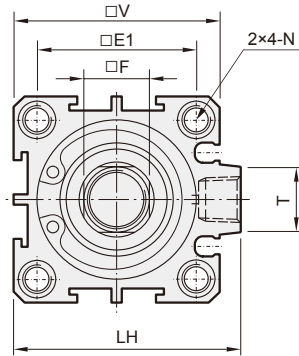
### $\phi 20\sim\phi 100$



### $\phi 20, \phi 25$



### $\phi 32\sim\phi 100$



| Code<br>Tube I.D. | AM | AQ | B  | C   | D  | EE         | E1   | E2 | F  | G  | H    | K | L  | LH   | M    | N                                             | PA  | PB  |
|-------------------|----|----|----|-----|----|------------|------|----|----|----|------|---|----|------|------|-----------------------------------------------|-----|-----|
| 12                | 10 | 12 | 8  | 1   | 6  | M5×0.8     | 16.3 | 23 | 5  | 11 | 17   | 3 | 4  | —    | 4.3  | $\phi 6.5 \times 4.5$ depth, M5×0.8×7.5depth  | 6.5 | 6   |
| 16                | 10 | 12 | 8  | 1.5 | 6  | M5×0.8     | 19.8 | 28 | 5  | 11 | 17.5 | 3 | 4  | —    | 4.3  | $\phi 6.5 \times 4.5$ depth, M5×0.8×7.5depth  | 7   | 6.5 |
| 20                | 13 | 15 | 10 | 1.5 | 8  | M5×0.8     | 24   | —  | 6  | 15 | 20.5 | 3 | 5  | —    | 4.3  | $\phi 6.5 \times 4.5$ depth, M5×0.8×7.5depth  | 7.5 | —   |
| 25                | 15 | 17 | 13 | 2   | 10 | M5×0.8     | 28   | —  | 8  | 17 | 23   | 3 | 5  | —    | 5.1  | $\phi 9 \times 7$ depth, M6×1.0×10depth       | 8   | —   |
| 32                | 15 | 18 | 17 | 3   | 12 | Rc1/8 (*1) | 34   | —  | 10 | 22 | 25   | 3 | 6  | 48.5 | 5.1  | $\phi 9 \times 7$ depth, M6×1.0×10depth       | 9   | —   |
| 40                | 25 | 28 | 22 | 3   | 16 | Rc1/8 (*1) | 40   | —  | 14 | 28 | 35   | 3 | 8  | 56.5 | 6.9  | $\phi 10.5 \times 8$ depth, M8×1.25×12depth   | 10  | —   |
| 50                | 25 | 28 | 26 | 4   | 20 | Rc1/4 (*2) | 48   | —  | 17 | 38 | 37   | 3 | 11 | 70   | 6.9  | $\phi 11 \times 8.5$ depth, M8×1.25×16.5depth | 10  | —   |
| 63                | 25 | 28 | 26 | 4   | 20 | Rc1/4 (*2) | 60   | —  | 17 | 40 | 37   | 3 | 11 | 83   | 6.9  | $\phi 11 \times 8.5$ depth, M8×1.25×16.5depth | 12  | —   |
| 80                | 30 | 33 | 32 | 5   | 25 | Rc3/8 (*3) | 74   | —  | 22 | 45 | 44   | 4 | 13 | 102  | 10.5 | $\phi 14 \times 10.5$ depth, M12×1.75×12depth | 13  | —   |
| 100               | 35 | 38 | 35 | 5   | 30 | Rc3/8 (*3) | 90   | —  | 27 | 55 | 50   | 4 | 14 | 122  | 12.3 | $\phi 18.5 \times 13$ depth, M14×2×17depth    | 17  | —   |

\*1. Without magnet with stroke=5mm, EE=M5×0.8

\*3. Without magnet with stroke=5mm, EE=Rc1/4

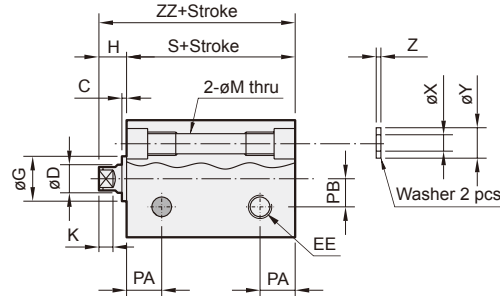
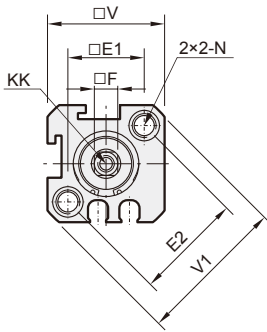
\*2. Without magnet with stroke=5mm, EE=Rc1/8

| Code<br>Tube I.D. | Q        | T  | V   | V1 | X    | Y    | Z   | Without magnet |      | Magnet |      |
|-------------------|----------|----|-----|----|------|------|-----|----------------|------|--------|------|
|                   |          |    |     |    |      |      |     | S              | ZZ   | S      | ZZ   |
| 12                | M5×0.8   | —  | 25  | 32 | 3.2  | 6.3  | 1   | 17             | 34   | 27     | 44   |
| 16                | M5×0.8   | —  | 29  | 38 | 3.2  | 6.3  | 1   | 18.5           | 36   | 28.5   | 46   |
| 20                | M6×1.0   | —  | 34  | —  | 3.2  | 6.3  | 1   | 19.5           | 40   | 29.5   | 50   |
| 25                | M8×1.25  | —  | 40  | —  | 4.2  | 7.8  | 1   | 21             | 44   | 31     | 54   |
| 32                | M10×1.25 | 14 | 44  | —  | 4.2  | 7.8  | 1   | 24.5           | 49.5 | 34.5   | 59.5 |
| 40                | M14×1.5  | 14 | 52  | —  | 6.2  | 10.3 | 1.6 | 26             | 61   | 36     | 71   |
| 50                | M18×1.5  | 19 | 62  | —  | 6.2  | 10.8 | 1.6 | 28             | 65   | 38     | 75   |
| 63                | M18×1.5  | 20 | 75  | —  | 6.2  | 10.8 | 1.6 | 32             | 69   | 42     | 79   |
| 80                | M22×1.5  | 27 | 94  | —  | 8.2  | 13.8 | 1.6 | 41             | 85   | 51     | 95   |
| 100               | M26×1.5  | 26 | 114 | —  | 10.2 | 17.3 | 2   | 51             | 101  | 61     | 111  |

## COMPACT CYLINDER

mindman

### $\phi 12, \phi 16$



### Long stroke

#### Without counter bore

With magnet type:  
The stroke length must be over 100mm.  
Without magnet type:  
The stroke length must be over 110mm.

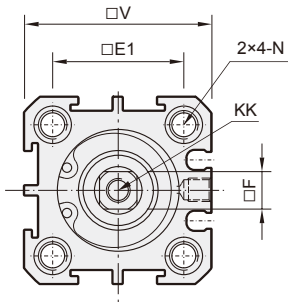
### $\phi 12, \phi 16$



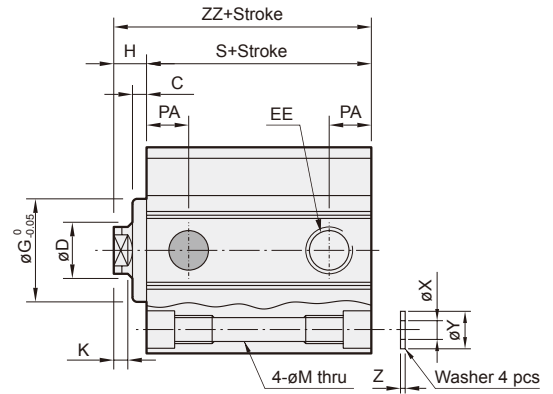
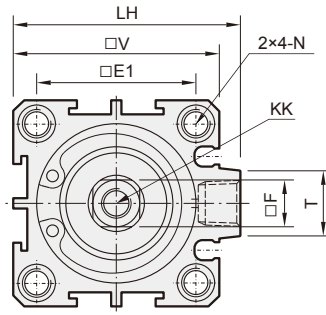
### $\phi 20\sim\phi 50$



### $\phi 20, \phi 25$



### $\phi 32\sim\phi 50$



| Code<br>Tube I.D. | C   | D  | EE        | E1   | E2 | F  | G  | H   | K | KK              | LH   | M   | N                               | PA  | PB  |
|-------------------|-----|----|-----------|------|----|----|----|-----|---|-----------------|------|-----|---------------------------------|-----|-----|
| 12                | 1   | 6  | M5×0.8    | 16.3 | 23 | 5  | 11 | 5   | 3 | M3×0.5×6depth   | —    | 4.3 | ø6.5×4.5depth, M5×0.8×7.5depth  | 6.5 | 6   |
| 16                | 1.5 | 6  | M5×0.8    | 19.8 | 28 | 5  | 11 | 5.5 | 3 | M3×0.5×6depth   | —    | 4.3 | ø6.5×4.5depth, M5×0.8×7.5depth  | 7   | 6.5 |
| 20                | 1.5 | 8  | M5×0.8    | 24   | —  | 6  | 15 | 5.5 | 3 | M4×0.7×8depth   | —    | 4.3 | ø6.5×4.5depth, M5×0.8×7.5depth  | 7.5 | —   |
| 25                | 2   | 10 | M5×0.8    | 28   | —  | 8  | 17 | 6   | 3 | M5×0.8×10depth  | —    | 5.1 | ø9×7depth, M6×1.0×10depth       | 8   | —   |
| 32                | 3   | 12 | Rc1/8     | 34   | —  | 10 | 22 | 7   | 3 | M6×1.0×12depth  | 48.5 | 5.1 | ø9×7depth, M6×1.0×10depth       | 9   | —   |
| 40                | 3   | 16 | Rc1/8     | 40   | —  | 14 | 28 | 7   | 3 | M8×1.25×12depth | 56.5 | 6.9 | ø10.5×8depth, M8×1.25×12depth   | 10  | —   |
| 50                | 4   | 20 | Rc1/4 (*) | 48   | —  | 17 | 38 | 9   | 3 | M10×1.5×15depth | 70   | 6.9 | ø11×8.5depth, M8×1.25×16.5depth | 10  | —   |

\* Without magnet with stroke=5mm, EE=Rc1/8

| Code<br>Tube I.D. | T  | V  | V1 | X   | Y    | Z   |
|-------------------|----|----|----|-----|------|-----|
| 12                | —  | 25 | 32 | 3.2 | 6.3  | 1   |
| 16                | —  | 29 | 38 | 3.2 | 6.3  | 1   |
| 20                | —  | 34 | —  | 3.2 | 6.3  | 1   |
| 25                | —  | 40 | —  | 4.2 | 7.8  | 1   |
| 32                | 14 | 44 | —  | 4.2 | 7.8  | 1   |
| 40                | 14 | 52 | —  | 6.2 | 10.3 | 1.6 |
| 50                | 19 | 62 | —  | 6.2 | 10.8 | 1.6 |

| Code<br>Tube I.D. | Without magnet |      |              |      | Magnet      |      |              |      |
|-------------------|----------------|------|--------------|------|-------------|------|--------------|------|
|                   | Stroke 5,10    |      | Stroke 15~30 |      | Stroke 5,10 |      | Stroke 15~30 |      |
|                   | S              | ZZ   | S            | ZZ   | S           | ZZ   | S            | ZZ   |
| 12                | 27             | 32   | 37           | 42   | 37          | 42   | 47           | 52   |
| 16                | 28.5           | 34   | 38.5         | 44   | 38.5        | 44   | 48.5         | 54   |
| 20                | 29.5           | 35   | 39.5         | 45   | 39.5        | 45   | 49.5         | 55   |
| 25                | 31             | 37   | 41           | 47   | 41          | 47   | 51           | 57   |
| 32                | 34.5           | 41.5 | 44.5         | 51.5 | 44.5        | 51.5 | 54.5         | 61.5 |
| 40                | 36             | 43   | 46           | 53   | 46          | 53   | 56           | 63   |

| Code<br>Tube I.D. | Without magnet |    | Magnet |    |
|-------------------|----------------|----|--------|----|
|                   | Stroke 5~20    |    |        |    |
|                   | S              | ZZ | S      | ZZ |
| 50                | 28             | 37 | 38     | 47 |

### Single acting – Table for standard stroke

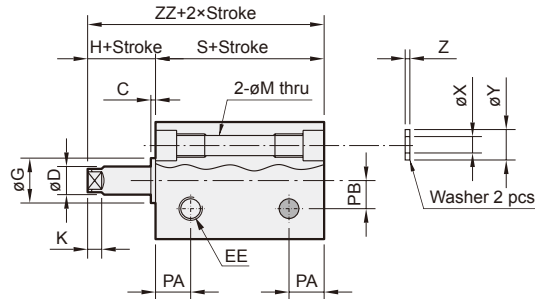
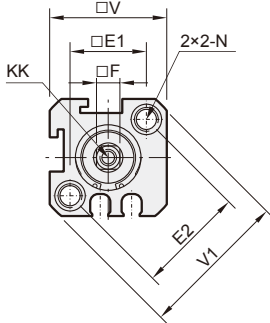
| Tube I.D.                     | Stroke (mm)           |
|-------------------------------|-----------------------|
| $\phi 12, 16, 20, 25, 32, 40$ | 5, 10, 15, 20, 25, 30 |
| $\phi 50$                     | 5, 10, 15, 20         |

- Please reconfirm dimension with our sales department when the stroke over our standard.

## COMPACT CYLINDER

mindman

### $\phi 12, \phi 16$

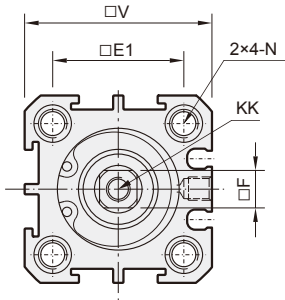


**Long stroke**  
**Without counter bore**  
 With magnet type:  
 The stroke length must be over 100mm.  
 Without magnet type:  
 The stroke length must be over 110mm.

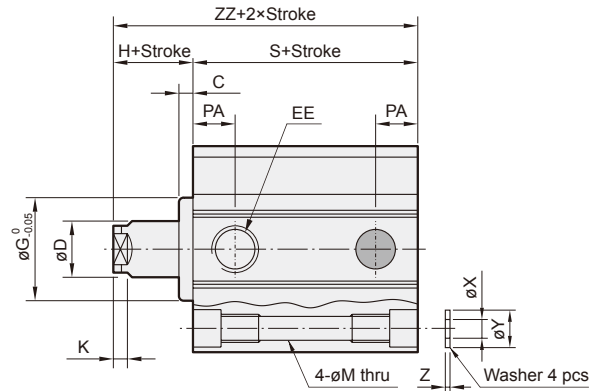
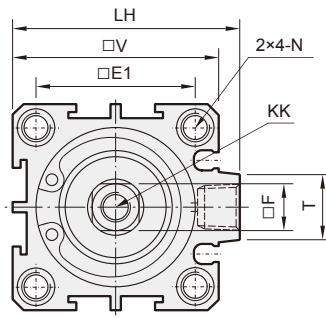
$\phi 12, \phi 16$

$\phi 20\sim\phi 50$

### $\phi 20, \phi 25$



### $\phi 32\sim\phi 50$



| Code<br>Tube I.D. | C   | D  | EE        | E1   | E2 | F  | G  | H   | K | KK              | LH   | M   | N                               | PA  | PB  |
|-------------------|-----|----|-----------|------|----|----|----|-----|---|-----------------|------|-----|---------------------------------|-----|-----|
| 12                | 1   | 6  | M5×0.8    | 16.3 | 23 | 5  | 11 | 5   | 3 | M3×0.5×6depth   | —    | 4.3 | ø6.5×4.5depth, M5×0.8×7.5depth  | 6.5 | 6   |
| 16                | 1.5 | 6  | M5×0.8    | 19.8 | 28 | 5  | 11 | 5.5 | 3 | M3×0.5×6depth   | —    | 4.3 | ø6.5×4.5depth, M5×0.8×7.5depth  | 7   | 6.5 |
| 20                | 1.5 | 8  | M5×0.8    | 24   | —  | 6  | 15 | 5.5 | 3 | M4×0.7×8depth   | —    | 4.3 | ø6.5×4.5depth, M5×0.8×7.5depth  | 7.5 | —   |
| 25                | 2   | 10 | M5×0.8    | 28   | —  | 8  | 17 | 6   | 3 | M5×0.8×10depth  | —    | 5.1 | ø9×7depth, M6×1.0×10depth       | 8   | —   |
| 32                | 3   | 12 | Rc1/8     | 34   | —  | 10 | 22 | 7   | 3 | M6×1.0×12depth  | 48.5 | 5.1 | ø9×7depth, M6×1.0×10depth       | 9   | —   |
| 40                | 3   | 16 | Rc1/8     | 40   | —  | 14 | 28 | 7   | 3 | M8×1.25×12depth | 56.5 | 6.9 | ø10.5×8depth, M8×1.25×12depth   | 10  | —   |
| 50                | 4   | 20 | Rc1/4 (*) | 48   | —  | 17 | 38 | 9   | 3 | M10×1.5×15depth | 70   | 6.9 | ø11×8.5depth, M8×1.25×16.5depth | 10  | —   |

\* Without magnet with stroke=5mm, EE=Rc1/8

| Code<br>Tube I.D. | T  | V  | V1 | X   | Y    | Z   |
|-------------------|----|----|----|-----|------|-----|
| 12                | —  | 25 | 32 | 3.2 | 6.3  | 1   |
| 16                | —  | 29 | 38 | 3.2 | 6.3  | 1   |
| 20                | —  | 34 | —  | 3.2 | 6.3  | 1   |
| 25                | —  | 40 | —  | 4.2 | 7.8  | 1   |
| 32                | 14 | 44 | —  | 4.2 | 7.8  | 1   |
| 40                | 14 | 52 | —  | 6.2 | 10.3 | 1.6 |
| 50                | 19 | 62 | —  | 6.2 | 10.8 | 1.6 |

| Code<br>Tube I.D. | Without magnet |      |              |      | Magnet      |      |              |      |
|-------------------|----------------|------|--------------|------|-------------|------|--------------|------|
|                   | Stroke 5,10    |      | Stroke 15~30 |      | Stroke 5,10 |      | Stroke 15~30 |      |
|                   | S              | ZZ   | S            | ZZ   | S           | ZZ   | S            | ZZ   |
| 12                | 27             | 32   | 37           | 42   | 37          | 42   | 47           | 52   |
| 16                | 28.5           | 34   | 38.5         | 44   | 38.5        | 44   | 48.5         | 54   |
| 20                | 29.5           | 35   | 39.5         | 45   | 39.5        | 45   | 49.5         | 55   |
| 25                | 31             | 37   | 41           | 47   | 41          | 47   | 51           | 57   |
| 32                | 34.5           | 41.5 | 44.5         | 51.5 | 44.5        | 51.5 | 54.5         | 61.5 |
| 40                | 36             | 43   | 46           | 53   | 46          | 53   | 56           | 63   |

| Code<br>Tube I.D. | Without magnet |    | Magnet |    |
|-------------------|----------------|----|--------|----|
|                   | Stroke 5~20    |    |        |    |
|                   | S              | ZZ | S      | ZZ |
| 50                | 28             | 37 | 38     | 47 |

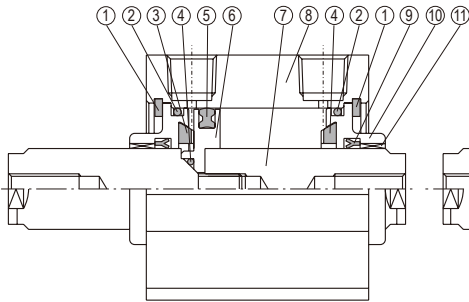
### Single acting – Table for standard stroke

| Tube I.D.                     | Stroke (mm)           |
|-------------------------------|-----------------------|
| $\phi 12, 16, 20, 25, 32, 40$ | 5, 10, 15, 20, 25, 30 |
| $\phi 50$                     | 5, 10, 15, 20         |

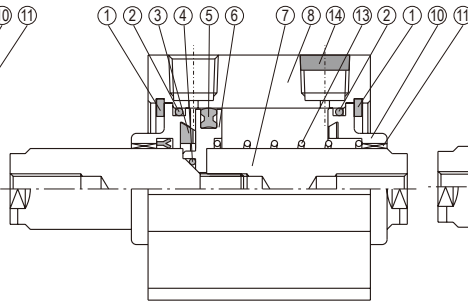
\* Please reconfirm dimension with our sales department when the stroke over our standard.



### Double acting

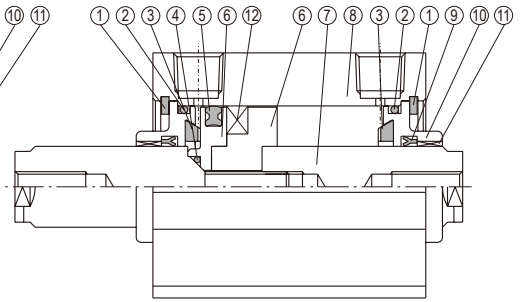


### Single acting



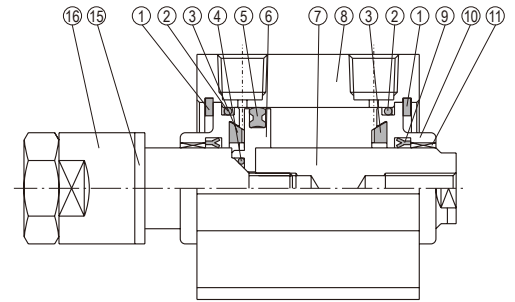
### Double acting

(with magnet)



### Double acting

Adjustable stroke



### Seal kit

| Acting type | Rod packing   |               | Piston packing |               | Cover ring                     | Piston gasket                  |
|-------------|---------------|---------------|----------------|---------------|--------------------------------|--------------------------------|
|             | Double acting | Single acting | Double acting  | Single acting | Double acting<br>single acting | Double acting<br>single acting |
| Q'y         | 2             | 1             | 1              | 1             | 2                              | 1                              |
| ø12         | KSYR-6        | KSYR-6        | OPA-12         | OPA-12        | d11×w1                         | d4×w1                          |
| ø16         | KSYR-6        | KSYR-6        | OPA-16         | OPA-16        | S-14                           | d4×w1                          |
| ø20         | KSYR-8        | KSYR-8        | OPA-20         | OPA-20        | S-18                           | d6×w1                          |
| ø25         | KSYR-10       | KSYR-10       | OPA-25         | OPA-25        | S-22                           | d6×w1                          |
| ø32         | KSYR-12       | KSYR-12       | OPA-32         | OPA-32        | d28×w2                         | d8×w1                          |
| ø40         | KSYR-16       | KSYR-16       | OPA-40         | OPA-40        | S-36                           | d11×w1                         |
| ø50         | KSYR-20       | KSYR-20       | OPA-50         | OPA-50        | AS-31                          | S-14                           |
| ø63         | KSYR-20       | —             | OPA-63         | —             | AS-35                          | S-14                           |
| ø80         | ORA-25        | —             | OPA-80         | —             | AS-41                          | S-18                           |
| ø100        | SDR-30        | —             | OPA-100        | —             | S-95                           | S-26                           |

### Material

| No. | Tube I.D.<br>Part name    | 12              | 16            | 20  | 25           | 32 | 40 | 50 | 63 | 80 | 100 | Q'y             | Component parts (inclusion) | Repair kits (inclusion) |   |
|-----|---------------------------|-----------------|---------------|-----|--------------|----|----|----|----|----|-----|-----------------|-----------------------------|-------------------------|---|
| 1   | Snap ring (Front end)     | SUS             | Spring steel  | SUS | Spring steel |    |    |    |    |    |     | 2               | ●                           |                         |   |
| 2   | Cover ring                | NBR             |               |     |              |    |    |    |    |    |     | 2               | ●                           | ●                       |   |
| 3   | Cushion packing           | —               | NBR           |     |              |    |    |    |    |    |     |                 | 2                           | ●                       | ● |
| 4   | Piston gasket             | NBR             |               |     |              |    |    |    |    |    |     | 1               | ●                           | ●                       |   |
| 5   | Piston packing            | NBR             |               |     |              |    |    |    |    |    |     | 1               | ●                           | ●                       |   |
| 6   | Piston                    | Aluminum alloy  |               |     |              |    |    |    |    |    |     | 1               | ●                           |                         |   |
| 7   | Piston With magnet rod *1 | SUS             |               |     | Carbon steel |    |    |    |    |    |     | 2               |                             |                         |   |
|     | Without magnet            | SUS             |               |     | Carbon steel |    |    |    |    |    |     | 2               |                             |                         |   |
| 8   | Body                      | Aluminum alloy  |               |     |              |    |    |    |    |    |     | 1               |                             |                         |   |
| 9   | Rod packing               | NBR             |               |     |              |    |    |    |    |    |     | 2 <sup>*2</sup> | ●                           | ●                       |   |
| 10  | Rod cover                 | Aluminum alloy  |               |     |              |    |    |    |    |    |     | 2               | ●                           |                         |   |
| 11  | Bush                      | —               | Bearing alloy |     |              |    |    |    |    |    | 2   | ●               |                             |                         |   |
| 12  | Magnet ring               | Magnet material |               |     |              |    |    |    |    |    |     | 1               | ●                           |                         |   |
| 13  | Spring                    | SWP             |               |     |              |    |    |    |    |    |     | 1               | ●                           |                         |   |
| 14  | Silencer                  | Brass           |               |     |              |    |    |    |    |    |     | 1               | ●                           |                         |   |
| 15  | Cushion packing           | PU              |               |     |              |    |    |    |    |    |     | 1               | ●                           |                         |   |
| 16  | Adjustable nut            | Carbon steel    |               |     |              |    |    |    |    |    |     | 1               | ●                           |                         |   |

\*1. When customized material is bearing steel, only two-side across flat (wrench flat) is available.

\*2. Single acting type, Q'y=1

### Order example Component parts

| Tube I.D. | Component parts  |
|-----------|------------------|
| ø12       | CP-MCJA-2-12(M)  |
| ø16       | CP-MCJA-2-16(M)  |
| ø20       | CP-MCJA-2-20(M)  |
| ø25       | CP-MCJA-2-25(M)  |
| ø32       | CP-MCJA-2-32(M)  |
| ø40       | CP-MCJA-2-40(M)  |
| ø50       | CP-MCJA-2-50(M)  |
| ø63       | CP-MCJA-2-63(M)  |
| ø80       | CP-MCJA-2-80(M)  |
| ø100      | CP-MCJA-2-100(M) |

M: With magnet

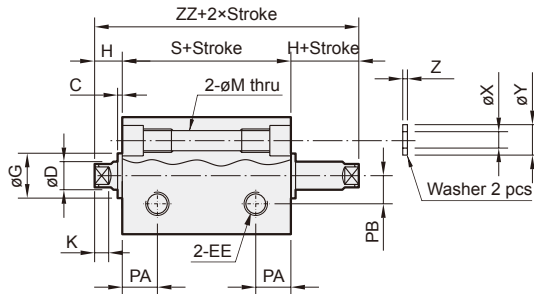
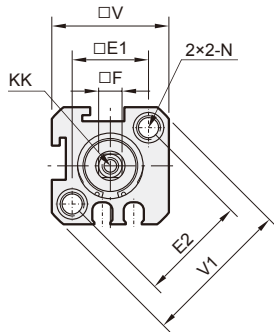
### Repair kits

| Tube I.D. | Repair kits   |
|-----------|---------------|
| ø12       | PS-MCJA-2-12  |
| ø16       | PS-MCJA-2-16  |
| ø20       | PS-MCJA-2-20  |
| ø25       | PS-MCJA-2-25  |
| ø32       | PS-MCJA-2-32  |
| ø40       | PS-MCJA-2-40  |
| ø50       | PS-MCJA-2-50  |
| ø63       | PS-MCJA-2-63  |
| ø80       | PS-MCJA-2-80  |
| ø100      | PS-MCJA-2-100 |

## COMPACT CYLINDER

mindman

$\varnothing 12, \varnothing 16$



Long stroke

Without counter bore

With magnet type:  
The stroke length must be over 100mm.

Without magnet type:  
The stroke length must be over 110mm.

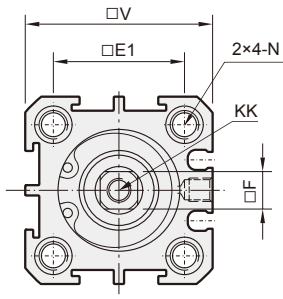
$\varnothing 12, \varnothing 16$



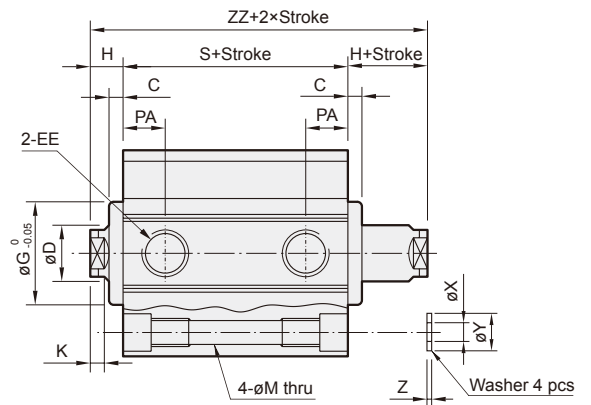
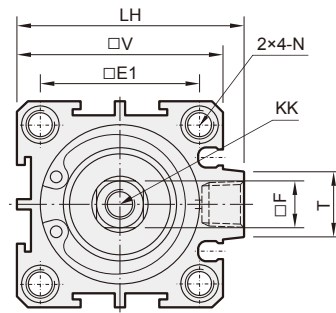
$\varnothing 20\sim\varnothing 100$



$\varnothing 20, \varnothing 25$



$\varnothing 32\sim\varnothing 100$



| Code<br>Tube I.D. | C   | D  | EE         | E1   | E2 | F  | G  | H   | K | KK              | LH   | M    | N                                                    | PA  | PB  |
|-------------------|-----|----|------------|------|----|----|----|-----|---|-----------------|------|------|------------------------------------------------------|-----|-----|
| 12                | 1   | 6  | M5×0.8     | 16.3 | 23 | 5  | 11 | 5   | 3 | M3×0.5×6depth   | —    | 4.3  | $\varnothing 6.5 \times 4.5$ depth, M5×0.8×7.5depth  | 6.5 | 6   |
| 16                | 1.5 | 6  | M5×0.8     | 19.8 | 28 | 5  | 11 | 5.5 | 3 | M3×0.5×6depth   | —    | 4.3  | $\varnothing 6.5 \times 4.5$ depth, M5×0.8×7.5depth  | 7   | 6.5 |
| 20                | 1.5 | 8  | M5×0.8     | 24   | —  | 6  | 15 | 5.5 | 3 | M4×0.7×8depth   | —    | 4.3  | $\varnothing 6.5 \times 4.5$ depth, M5×0.8×7.5depth  | 7.5 | —   |
| 25                | 2   | 10 | M5×0.8     | 28   | —  | 8  | 17 | 6   | 3 | M5×0.8×10depth  | —    | 5.1  | $\varnothing 9 \times 7$ depth, M6×1.0×10depth       | 8   | —   |
| 32                | 3   | 12 | Rc1/8 (*1) | 34   | —  | 10 | 22 | 7   | 3 | M6×1.0×12depth  | 48.5 | 5.1  | $\varnothing 9 \times 7$ depth, M6×1.0×10depth       | 9   | —   |
| 40                | 3   | 16 | Rc1/8 (*1) | 40   | —  | 14 | 28 | 7   | 3 | M8×1.25×12depth | 56.5 | 6.9  | $\varnothing 10.5 \times 8$ depth, M8×1.25×12depth   | 10  | —   |
| 50                | 4   | 20 | Rc1/4 (*2) | 48   | —  | 17 | 38 | 9   | 3 | M10×1.5×15depth | 70   | 6.9  | $\varnothing 11 \times 8.5$ depth, M8×1.25×16.5depth | 10  | —   |
| 63                | 4   | 20 | Rc1/4 (*2) | 60   | —  | 17 | 40 | 9   | 3 | M10×1.5×15depth | 83   | 6.9  | $\varnothing 11 \times 8.5$ depth, M8×1.25×16.5depth | 12  | —   |
| 80                | 5   | 25 | Rc3/8 (*3) | 74   | —  | 22 | 45 | 11  | 4 | M14×1.5×20depth | 102  | 10.5 | $\varnothing 14 \times 10.5$ depth, M12×1.75×12depth | 13  | —   |
| 100               | 5   | 30 | Rc3/8 (*3) | 90   | —  | 27 | 55 | 12  | 4 | M18×1.5×20depth | 122  | 12.3 | $\varnothing 18.5 \times 13$ depth, M14×2×17depth    | 17  | —   |

\*1. Without magnet with stroke=5mm, EE=M5×0.8

\*3. Without magnet with stroke=5mm, EE=Rc1/4

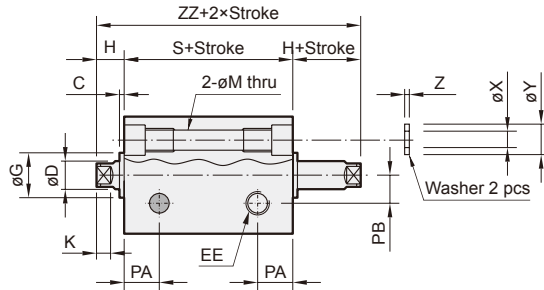
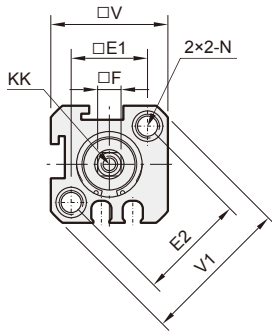
\*2. Without magnet with stroke=5mm, EE=Rc1/8

| Code<br>Tube I.D. | T  | V   | V1 | X    | Y    | Z   | Without magnet |      | Magnet |      |
|-------------------|----|-----|----|------|------|-----|----------------|------|--------|------|
|                   |    |     |    |      |      |     | S              | ZZ   | S      | ZZ   |
| 12                | —  | 25  | 32 | 3.2  | 6.3  | 1   | 17             | 27   | 27     | 37   |
| 16                | —  | 29  | 38 | 3.2  | 6.3  | 1   | 18.5           | 29.5 | 28.5   | 39.5 |
| 20                | —  | 34  | —  | 3.2  | 6.3  | 1   | 19.5           | 30.5 | 29.5   | 40.5 |
| 25                | —  | 40  | —  | 4.2  | 7.8  | 1   | 21             | 33   | 31     | 43   |
| 32                | 14 | 44  | —  | 4.2  | 7.8  | 1   | 24.5           | 38.5 | 34.5   | 48.5 |
| 40                | 14 | 52  | —  | 6.2  | 10.3 | 1.6 | 26             | 40   | 36     | 50   |
| 50                | 19 | 62  | —  | 6.2  | 10.8 | 1.6 | 28             | 46   | 38     | 56   |
| 63                | 20 | 75  | —  | 6.2  | 10.8 | 1.6 | 32             | 50   | 42     | 60   |
| 80                | 27 | 94  | —  | 8.2  | 13.8 | 1.6 | 41             | 63   | 51     | 73   |
| 100               | 26 | 114 | —  | 10.2 | 17.3 | 2   | 51             | 75   | 61     | 85   |



## COMPACT CYLINDER

$\phi 12, \phi 16$



Long stroke

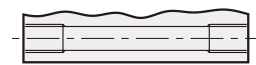
Without counter bore

With magnet type:  
The stroke length must be over 100mm.  
Without magnet type:  
The stroke length must be over 110mm.

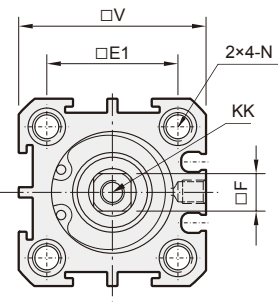
$\phi 12, \phi 16$



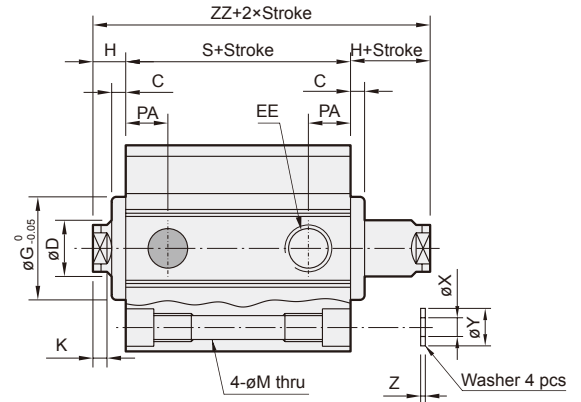
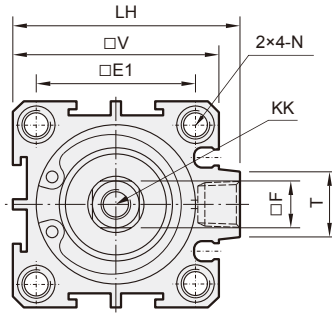
$\phi 20\sim\phi 50$



$\phi 20, \phi 25$



$\phi 32\sim\phi 50$



| Code<br>Tube I.D. | C   | D  | EE        | E1   | E2 | F  | G  | H   | K | KK              | LH   | M   | N                                            | PA  | PB  |
|-------------------|-----|----|-----------|------|----|----|----|-----|---|-----------------|------|-----|----------------------------------------------|-----|-----|
| 12                | 1   | 6  | M5×0.8    | 16.3 | 23 | 5  | 11 | 5   | 3 | M3×0.5×6depth   | —    | 4.3 | $\phi 6.5\times 4.5$ depth, M5×0.8×7.5depth  | 6.5 | 6   |
| 16                | 1.5 | 6  | M5×0.8    | 19.8 | 28 | 5  | 11 | 5.5 | 3 | M3×0.5×6depth   | —    | 4.3 | $\phi 6.5\times 4.5$ depth, M5×0.8×7.5depth  | 7   | 6.5 |
| 20                | 1.5 | 8  | M5×0.8    | 24   | —  | 6  | 15 | 5.5 | 3 | M4×0.7×8depth   | —    | 4.3 | $\phi 6.5\times 4.5$ depth, M5×0.8×7.5depth  | 7.5 | —   |
| 25                | 2   | 10 | M5×0.8    | 28   | —  | 8  | 17 | 6   | 3 | M5×0.8×10depth  | —    | 5.1 | $\phi 9\times 7$ depth, M6×1.0×10depth       | 8   | —   |
| 32                | 3   | 12 | Rc1/8     | 34   | —  | 10 | 22 | 7   | 3 | M6×1.0×12depth  | 48.5 | 5.1 | $\phi 9\times 7$ depth, M6×1.0×10depth       | 9   | —   |
| 40                | 3   | 16 | Rc1/8     | 40   | —  | 14 | 28 | 7   | 3 | M8×1.25×12depth | 56.5 | 6.9 | $\phi 10.5\times 8$ depth, M8×1.25×12depth   | 10  | —   |
| 50                | 4   | 20 | Rc1/4 (*) | 48   | —  | 17 | 38 | 9   | 3 | M10×1.5×15depth | 70   | 6.9 | $\phi 11\times 8.5$ depth, M8×1.25×16.5depth | 10  | —   |

\* Without magnet with stroke=5mm, EE=Rc1/8

| Code<br>Tube I.D. | T  | V  | V1 | X   | Y    | Z   |
|-------------------|----|----|----|-----|------|-----|
| 12                | —  | 25 | 32 | 3.2 | 6.3  | 1   |
| 16                | —  | 29 | 38 | 3.2 | 6.3  | 1   |
| 20                | —  | 34 | —  | 3.2 | 6.3  | 1   |
| 25                | —  | 40 | —  | 4.2 | 7.8  | 1   |
| 32                | 14 | 44 | —  | 4.2 | 7.8  | 1   |
| 40                | 14 | 52 | —  | 6.2 | 10.3 | 1.6 |
| 50                | 19 | 62 | —  | 6.2 | 10.8 | 1.6 |

| Code<br>Tube I.D. | Without magnet |              | Magnet      |              |      |      |      |      |
|-------------------|----------------|--------------|-------------|--------------|------|------|------|------|
|                   | Stroke 5,10    | Stroke 15~30 | Stroke 5,10 | Stroke 15~30 | S    | ZZ   |      |      |
| 12                | 27             | 37           | 37          | 47           | 37   | 47   | 47   | 57   |
| 16                | 28.5           | 39.5         | 38.5        | 49.5         | 38.5 | 49.5 | 48.5 | 59.5 |
| 20                | 29.5           | 40.5         | 39.5        | 50.5         | 39.5 | 50.5 | 49.5 | 60.5 |
| 25                | 31             | 43           | 41          | 53           | 41   | 53   | 51   | 63   |
| 32                | 34.5           | 48.5         | 44.5        | 58.5         | 44.5 | 58.5 | 54.5 | 68.5 |
| 40                | 36             | 50           | 46          | 60           | 46   | 60   | 56   | 70   |

| Code<br>Tube I.D. | Without magnet |    | Magnet |    |
|-------------------|----------------|----|--------|----|
|                   | S              | ZZ | S      | ZZ |
| 50                | 28             | 46 | 38     | 56 |

### Single acting – Table for standard stroke

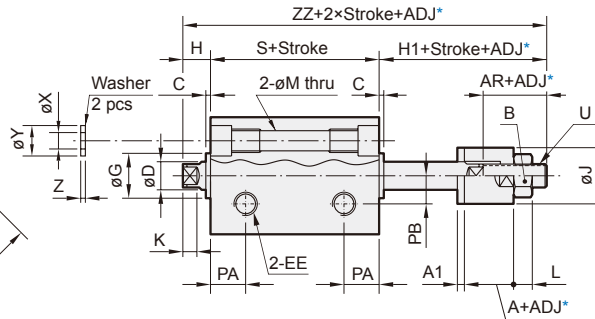
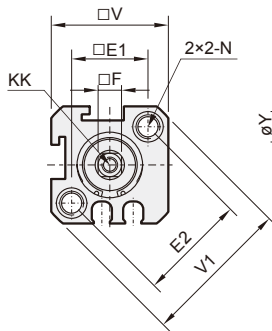
| Tube I.D.                     | Stroke (mm)           |
|-------------------------------|-----------------------|
| $\phi 12, 16, 20, 25, 32, 40$ | 5, 10, 15, 20, 25, 30 |
| $\phi 50$                     | 5, 10, 15, 20         |

\* Please reconfirm dimension with our sales department when the stroke over our standard.

## COMPACT CYLINDER

mindman

$\phi 12, \phi 16$



Long stroke

Without counter bore

With magnet type:  
The stroke length must be over 100mm.  
Without magnet type:  
The stroke length must be over 110mm.

$\phi 12, \phi 16$

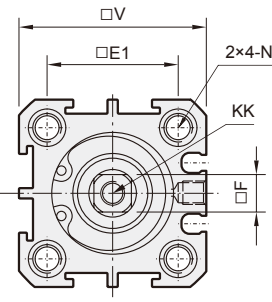


$\phi 20, \phi 100$

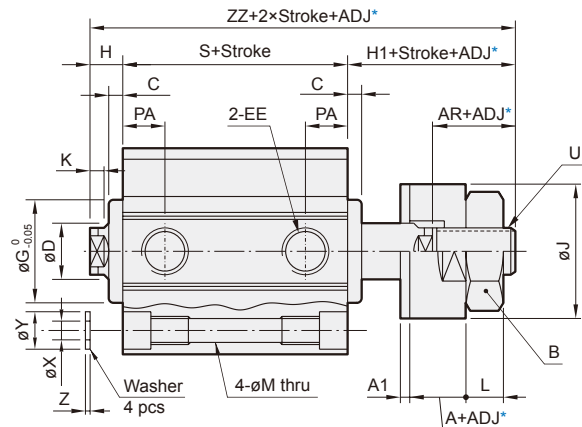
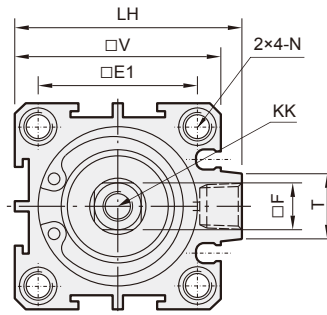


\*ADJ: Adjustable stroke

$\phi 20, \phi 25$



$\phi 32\sim\phi 100$



| Code<br>Tube I.D. | A  | A1 | AR   | B  | C   | D  | EE         | E1   | E2 | F  | G  | H   | H1   | J  | K | KK              | L  | LH   | M    |
|-------------------|----|----|------|----|-----|----|------------|------|----|----|----|-----|------|----|---|-----------------|----|------|------|
| 12                | 13 | 2  | 16   | 8  | 1   | 6  | M5×0.8     | 16.3 | 23 | 5  | 11 | 5   | 22.5 | 12 | 3 | M3×0.5×6depth   | 4  | —    | 4.3  |
| 16                | 13 | 2  | 16.5 | 8  | 1.5 | 6  | M5×0.8     | 19.8 | 28 | 5  | 11 | 5.5 | 23.5 | 12 | 3 | M3×0.5×6depth   | 4  | —    | 4.3  |
| 20                | 15 | 2  | 19   | 13 | 1.5 | 8  | M5×0.8     | 24   | —  | 6  | 15 | 5.5 | 26   | 16 | 3 | M4×0.7×8depth   | 5  | —    | 4.3  |
| 25                | 15 | 2  | 19.5 | 13 | 2   | 10 | M5×0.8     | 28   | —  | 8  | 17 | 6   | 27.2 | 16 | 3 | M5×0.8×10depth  | 5  | —    | 5.1  |
| 32                | 12 | 2  | 18   | 17 | 3   | 12 | Rc1/8 (*1) | 34   | —  | 10 | 22 | 7   | 26   | 20 | 3 | M6×1.0×12depth  | 6  | 48.5 | 5.1  |
| 40                | 12 | 2  | 20   | 19 | 3   | 16 | Rc1/8 (*1) | 40   | —  | 14 | 28 | 7   | 28   | 30 | 3 | M8×1.25×12depth | 7  | 56.5 | 6.9  |
| 50                | 15 | 2  | 22   | 24 | 4   | 20 | Rc1/4 (*2) | 48   | —  | 17 | 38 | 9   | 31   | 40 | 3 | M10×1.5×15depth | 8  | 70   | 6.9  |
| 63                | 15 | 2  | 22   | 24 | 4   | 20 | Rc1/4 (*2) | 60   | —  | 17 | 40 | 9   | 31   | 40 | 3 | M10×1.5×15depth | 8  | 83   | 6.9  |
| 80                | 20 | 3  | 33   | 32 | 5   | 25 | Rc3/8 (*3) | 74   | —  | 22 | 45 | 11  | 44   | 50 | 4 | M14×1.5×20depth | 13 | 102  | 10.5 |
| 100               | 20 | 3  | 33   | 32 | 5   | 30 | Rc3/8 (*3) | 90   | —  | 27 | 55 | 12  | 44   | 50 | 4 | M18×1.5×20depth | 13 | 122  | 12.3 |

\*1. Without magnet with stroke=5mm, EE=M5×0.8

\*3. Without magnet with stroke=5mm, EE=Rc1/4

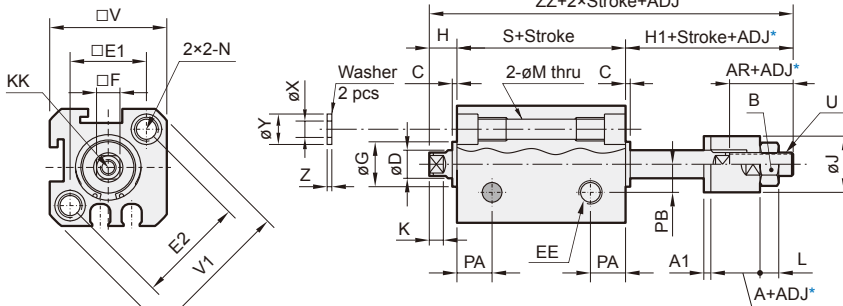
\*2. Without magnet with stroke=5mm, EE=Rc1/8

| Code<br>Tube I.D. | N                                             | PA  | PB  | T  | U        | V   | V1 | X    | Y    | Z   | Without magnet |      | Magnet |      |
|-------------------|-----------------------------------------------|-----|-----|----|----------|-----|----|------|------|-----|----------------|------|--------|------|
|                   |                                               |     |     |    |          |     |    |      |      |     | S              | ZZ   | S      | ZZ   |
| 12                | $\phi 6.5 \times 4.5$ depth, M5×0.8×7.5depth  | 6.5 | 6   | —  | M5×0.8   | 25  | 32 | 3.2  | 6.3  | 1   | 17             | 44.5 | 27     | 54.5 |
| 16                | $\phi 6.5 \times 4.5$ depth, M5×0.8×7.5depth  | 7   | 6.5 | —  | M5×0.8   | 29  | 38 | 3.2  | 6.3  | 1   | 18.5           | 47.5 | 28.5   | 57.5 |
| 20                | $\phi 6.5 \times 4.5$ depth, M5×0.8×7.5depth  | 7.5 | —   | —  | M8×1.25  | 34  | —  | 3.2  | 6.3  | 1   | 19.5           | 51   | 29.5   | 61   |
| 25                | $\phi 9 \times 7$ depth, M6×1.0×10depth       | 8   | —   | —  | M8×1.25  | 40  | —  | 4.2  | 7.8  | 1   | 21             | 54.2 | 31     | 64.2 |
| 32                | $\phi 9 \times 7$ depth, M6×1.0×10depth       | 9   | —   | 14 | M10×1.25 | 44  | —  | 4.2  | 7.8  | 1   | 24.5           | 57.5 | 34.5   | 67.5 |
| 40                | $\phi 10.5 \times 8$ depth, M8×1.25×12depth   | 10  | —   | 14 | M12×1.25 | 52  | —  | 6.2  | 10.3 | 1.6 | 26             | 61   | 36     | 71   |
| 50                | $\phi 11 \times 8.5$ depth, M8×1.25×16.5depth | 10  | —   | 19 | M16×1.5  | 62  | —  | 6.2  | 10.8 | 1.6 | 28             | 68   | 38     | 78   |
| 63                | $\phi 11 \times 8.5$ depth, M8×1.25×16.5depth | 12  | —   | 20 | M16×1.5  | 75  | —  | 6.2  | 10.8 | 1.6 | 32             | 72   | 42     | 82   |
| 80                | $\phi 14 \times 10.5$ depth, M12×1.75×12depth | 13  | —   | 27 | M22×1.5  | 94  | —  | 8.2  | 13.8 | 1.6 | 41             | 96   | 51     | 106  |
| 100               | $\phi 18.5 \times 13$ depth, M14×2×17depth    | 17  | —   | 26 | M22×1.5  | 114 | —  | 10.2 | 17.3 | 2   | 51             | 107  | 61     | 117  |

COMPACT CYLINDER

mindman

$\phi 12, \phi 16$



\*ADJ: Adjustable stroke

Long stroke

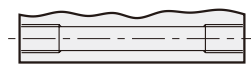
Without counter bore

With magnet type:  
The stroke length must be over 100mm.  
Without magnet type:  
The stroke length must be over 110mm.

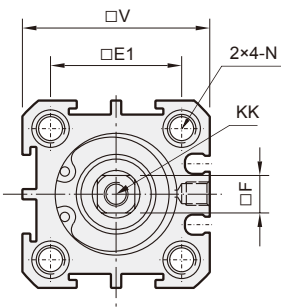
$\phi 12, \phi 16$



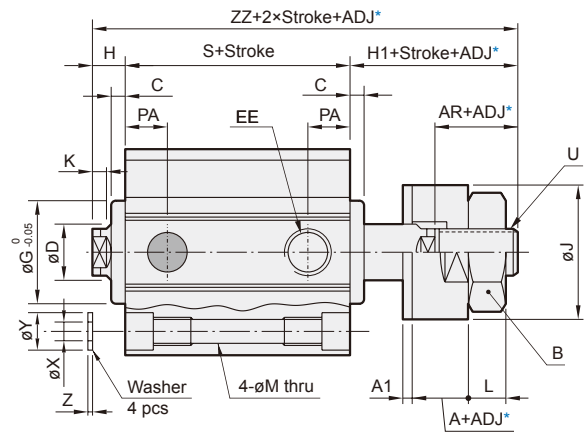
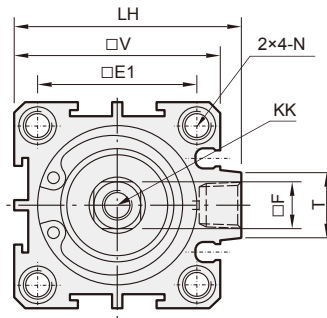
$\phi 20\sim\phi 50$



$\phi 20, \phi 25$



$\phi 32\sim\phi 50$



| Code<br>Tube I.D. | A  | A1 | AR   | B  | C   | D  | EE        | E1   | E2 | F  | G  | H   | H1   | J  | K | KK              | L | LH   | M   | N                                             |
|-------------------|----|----|------|----|-----|----|-----------|------|----|----|----|-----|------|----|---|-----------------|---|------|-----|-----------------------------------------------|
| 12                | 13 | 2  | 16   | 8  | 1   | 6  | M5×0.8    | 16.3 | 23 | 5  | 11 | 5   | 22.5 | 12 | 3 | M3×0.5×6depth   | 4 | —    | 4.3 | $\phi 6.5 \times 4.5$ depth, M5×0.8×7.5depth  |
| 16                | 13 | 2  | 16.5 | 8  | 1.5 | 6  | M5×0.8    | 19.8 | 28 | 5  | 11 | 5.5 | 23.5 | 12 | 3 | M3×0.5×6depth   | 4 | —    | 4.3 | $\phi 6.5 \times 4.5$ depth, M5×0.8×7.5depth  |
| 20                | 15 | 2  | 19   | 13 | 1.5 | 8  | M5×0.8    | 24   | —  | 6  | 15 | 5.5 | 26   | 16 | 3 | M4×0.7×8depth   | 5 | —    | 4.3 | $\phi 6.5 \times 4.5$ depth, M5×0.8×7.5depth  |
| 25                | 15 | 2  | 19.5 | 13 | 2   | 10 | M5×0.8    | 28   | —  | 8  | 17 | 6   | 27.2 | 16 | 3 | M5×0.8×10depth  | 5 | —    | 5.1 | $\phi 9 \times 7$ depth, M6×1.0×10depth       |
| 32                | 12 | 2  | 18   | 17 | 3   | 12 | Rc1/8     | 34   | —  | 10 | 22 | 7   | 26   | 20 | 3 | M6×1.0×12depth  | 6 | 48.5 | 5.1 | $\phi 9 \times 7$ depth, M6×1.0×10depth       |
| 40                | 12 | 2  | 20   | 19 | 3   | 16 | Rc1/8     | 40   | —  | 14 | 28 | 7   | 28   | 30 | 3 | M8×1.25×12depth | 7 | 56.5 | 6.9 | $\phi 10.5 \times 8$ depth, M8×1.25×12depth   |
| 50                | 15 | 2  | 22   | 24 | 4   | 20 | Rc1/4 (*) | 48   | —  | 17 | 38 | 9   | 31   | 40 | 3 | M10×1.5×15depth | 8 | 70   | 6.9 | $\phi 11 \times 8.5$ depth, M8×1.25×16.5depth |

\* Without magnet with stroke=5mm, EE=Rc1/8

| Code<br>Tube I.D. | PA  | PB  | T  | U        | V  | V1 | X   | Y    | Z   |
|-------------------|-----|-----|----|----------|----|----|-----|------|-----|
| 12                | 6.5 | 6   | —  | M5×0.8   | 25 | 32 | 3.2 | 6.3  | 1   |
| 16                | 7   | 6.5 | —  | M5×0.8   | 29 | 38 | 3.2 | 6.3  | 1   |
| 20                | 7.5 | —   | —  | M8×1.25  | 34 | —  | 3.2 | 6.3  | 1   |
| 25                | 8   | —   | —  | M8×1.25  | 40 | —  | 4.2 | 7.8  | 1   |
| 32                | 9   | —   | 14 | M10×1.25 | 44 | —  | 4.2 | 7.8  | 1   |
| 40                | 10  | —   | 14 | M12×1.25 | 52 | —  | 6.2 | 10.3 | 1.6 |
| 50                | 10  | —   | 19 | M16×1.5  | 62 | —  | 6.2 | 10.8 | 1.6 |

| Code<br>Tube I.D. | Without magnet |      |              |      | Magnet      |      |              |      |
|-------------------|----------------|------|--------------|------|-------------|------|--------------|------|
|                   | Stroke 5,10    |      | Stroke 15~30 |      | Stroke 5,10 |      | Stroke 15~30 |      |
|                   | S              | ZZ   | S            | ZZ   | S           | ZZ   | S            | ZZ   |
| 12                | 27             | 54.5 | 37           | 64.5 | 37          | 64.5 | 47           | 74.5 |
| 16                | 28.5           | 57.5 | 38.5         | 67.5 | 38.5        | 67.5 | 48.5         | 77.5 |
| 20                | 29.5           | 61   | 39.5         | 71   | 39.5        | 71   | 49.5         | 81   |
| 25                | 31             | 64.2 | 41           | 74.2 | 41          | 74.2 | 51           | 84.2 |
| 32                | 34.5           | 67.5 | 44.5         | 77.5 | 44.5        | 77.5 | 54.5         | 87.5 |
| 40                | 36             | 71   | 46           | 81   | 46          | 81   | 56           | 91   |

| Code<br>Tube I.D. | Without magnet |    | Magnet |    |
|-------------------|----------------|----|--------|----|
|                   | Stroke 5~20    |    |        |    |
|                   | S              | ZZ | S      | ZZ |
| 50                | 28             | 68 | 38     | 78 |

Single acting – Table for standard stroke

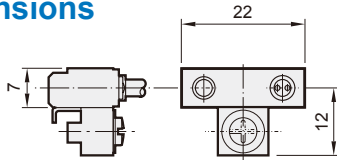
| Tube I.D.                     | Stroke (mm)           |
|-------------------------------|-----------------------|
| $\phi 12, 16, 20, 25, 32, 40$ | 5, 10, 15, 20, 25, 30 |
| $\phi 50$                     | 5, 10, 15, 20         |

\* Please reconfirm dimension with our sales department when the stroke over our standard.

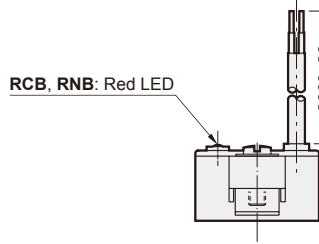
## COMPACT CYLINDER

### Dimensions

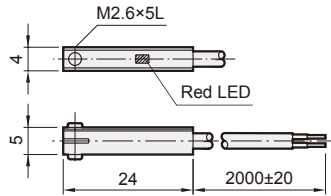
**RCB  
RNB**



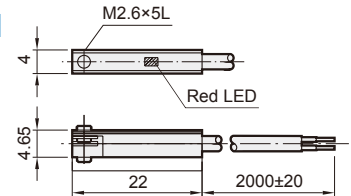
RCB, RNB: Red LED



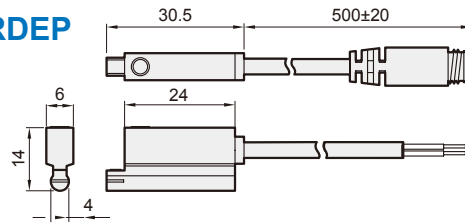
**RCE**



**RCE1  
RNE**

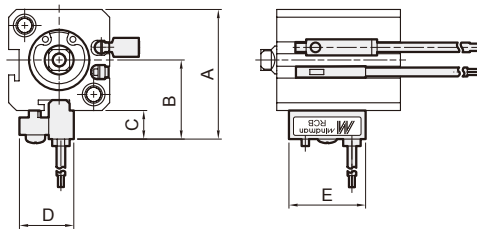


**RDEP**

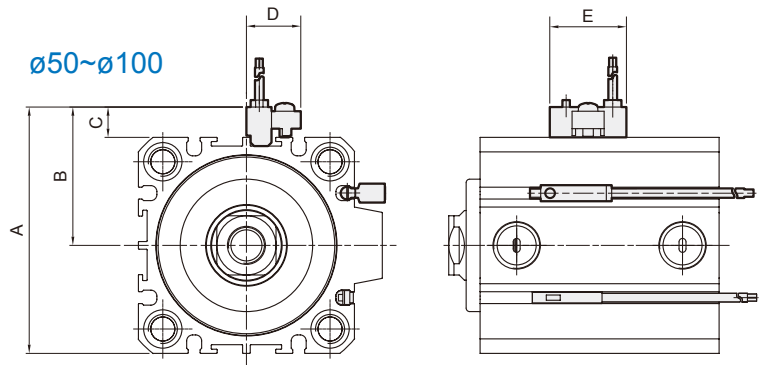


### Installation of sensor switch

$\varnothing 12\sim\varnothing 40$



$\varnothing 50\sim\varnothing 100$



### Order example

RCE1 — □

MODEL

RCB / RCE / RCE1 (C: Reed switch)  
RNB / RNE (N: Solid state switch)  
RDEP (Solid state switch)

WIRE LENGTH

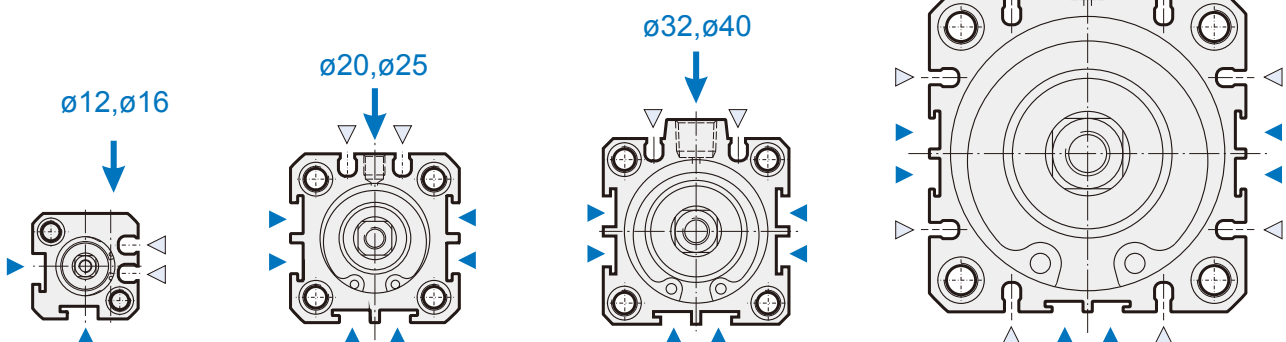
Blank: L=2000m  
1M: L=1000m  
QD: M8 3Pin connector  
EQD: M8 3Pin connector

| Code<br>Tube I.D. | A    | B    | C   | D  | E  |
|-------------------|------|------|-----|----|----|
| 12                | 33.5 | 21.5 | 8.5 | 16 | 22 |
| 16                | 37.5 | 23   | 8.5 | 16 | 22 |
| 20                | 42.5 | 25.5 | 8.5 | 16 | 22 |
| 25                | 49   | 29   | 9   | 16 | 22 |
| 32                | 53   | 31   | 9   | 16 | 22 |

| Code<br>Tube I.D. | A   | B    | C | D  | E  |
|-------------------|-----|------|---|----|----|
| 40                | 61  | 35   | 9 | 16 | 22 |
| 50                | 71  | 40   | 9 | 16 | 22 |
| 63                | 84  | 46.5 | 9 | 16 | 22 |
| 80                | 103 | 56   | 9 | 16 | 22 |
| 100               | 123 | 66   | 9 | 16 | 22 |







### Description

▼ RCB switch ▼ RCE, RCE1, RDEP switch ↓ Port




### Cylinder weight

Unit: g

| Model             | Basic weight<br>MCJA-11                                                           | Basic weight (magnet)<br>MCJA-11                                                  | Stroke 5 mm<br>MCJA-11                                                            | Basic weight<br>MCJA-12                                                            | Basic weight (magnet)<br>MCJA-12                                                    | Stroke 5 mm<br>MCJA-12                                                              |
|-------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Tube I.D.         |  |  |  |  |  |  |
| $\varnothing 12$  | 43                                                                                | 45                                                                                | 6                                                                                 | 41                                                                                 | 43                                                                                  | 6                                                                                   |
| $\varnothing 16$  | 60                                                                                | 65                                                                                | 8                                                                                 | 57                                                                                 | 63                                                                                  | 8                                                                                   |
| $\varnothing 20$  | 84                                                                                | 92                                                                                | 11                                                                                | 79                                                                                 | 87                                                                                  | 11                                                                                  |
| $\varnothing 25$  | 101                                                                               | 114                                                                               | 14                                                                                | 106                                                                                | 120                                                                                 | 14                                                                                  |
| $\varnothing 32$  | 170                                                                               | 187                                                                               | 16                                                                                | 155                                                                                | 173                                                                                 | 16                                                                                  |
| $\varnothing 40$  | 274                                                                               | 300                                                                               | 23                                                                                | 235                                                                                | 261                                                                                 | 23                                                                                  |
| $\varnothing 50$  | 448                                                                               | 479                                                                               | 32                                                                                | 384                                                                                | 415                                                                                 | 32                                                                                  |
| $\varnothing 63$  | 635                                                                               | 699                                                                               | 40                                                                                | 571                                                                                | 634                                                                                 | 40                                                                                  |
| $\varnothing 80$  | 1178                                                                              | 1275                                                                              | 61                                                                                | 1057                                                                               | 1153                                                                                | 61                                                                                  |
| $\varnothing 100$ | 2058                                                                              | 2231                                                                              | 83                                                                                | 1806                                                                               | 1980                                                                                | 83                                                                                  |

\* The weight is based on 5 mm stroke.

### Accessories weight

| Model             | Rod nut                                                                             |
|-------------------|-------------------------------------------------------------------------------------|
| Tube I.D.         |  |
| $\varnothing 12$  | 1                                                                                   |
| $\varnothing 16$  | 1                                                                                   |
| $\varnothing 20$  | 2                                                                                   |
| $\varnothing 25$  | 4                                                                                   |
| $\varnothing 32$  | 8                                                                                   |
| $\varnothing 40$  | 18                                                                                  |
| $\varnothing 50$  | 32                                                                                  |
| $\varnothing 63$  | 32                                                                                  |
| $\varnothing 80$  | 56                                                                                  |
| $\varnothing 100$ | 56                                                                                  |