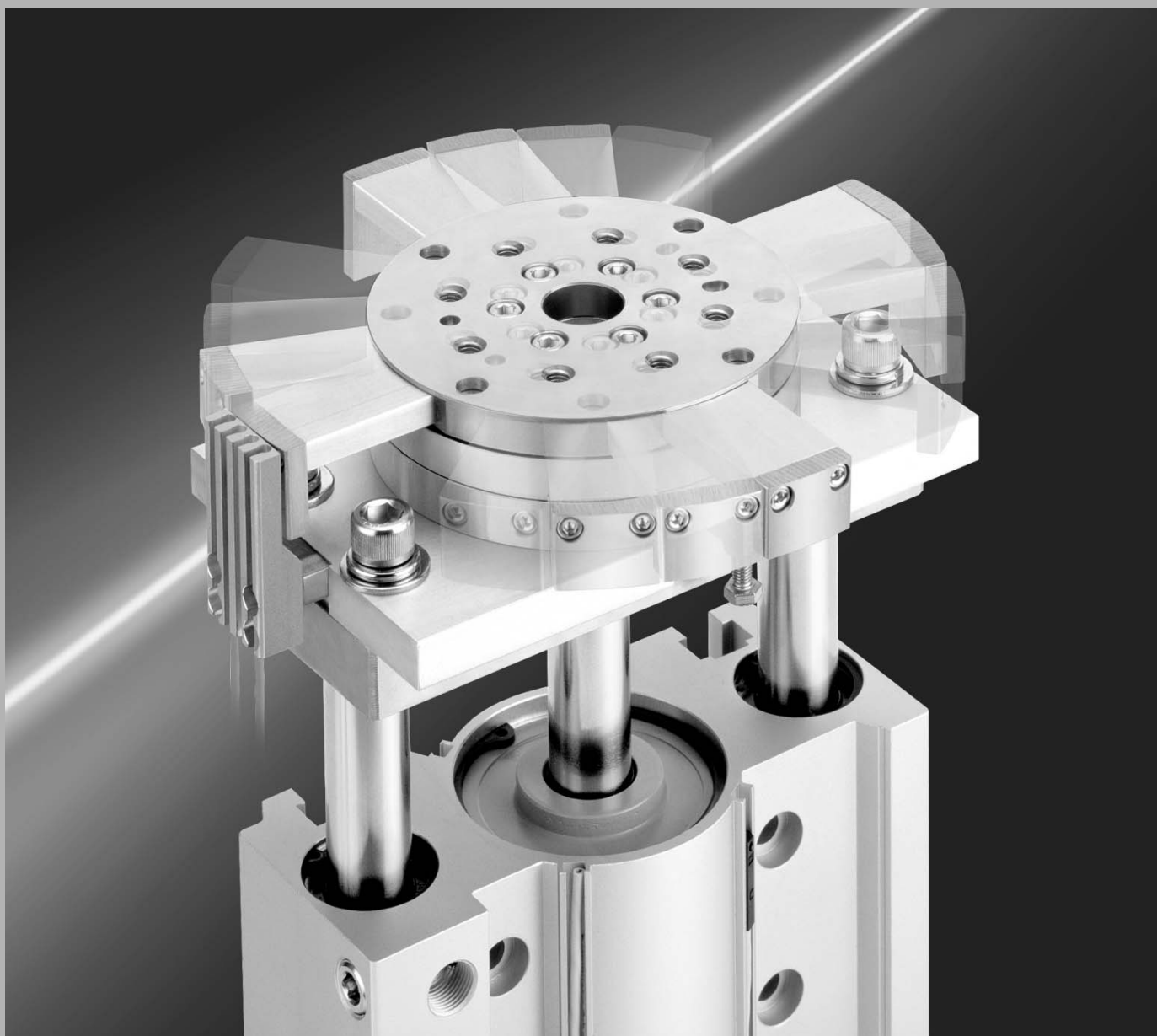


Cylinder with Turntable *Series MGT*

ø63, ø80, ø100



MX□

MTS

MY□

CY□

MG□

CX□

D-

-X

20-

Data

Flat cylinder with guide (Series MGP) and manual turntable combination

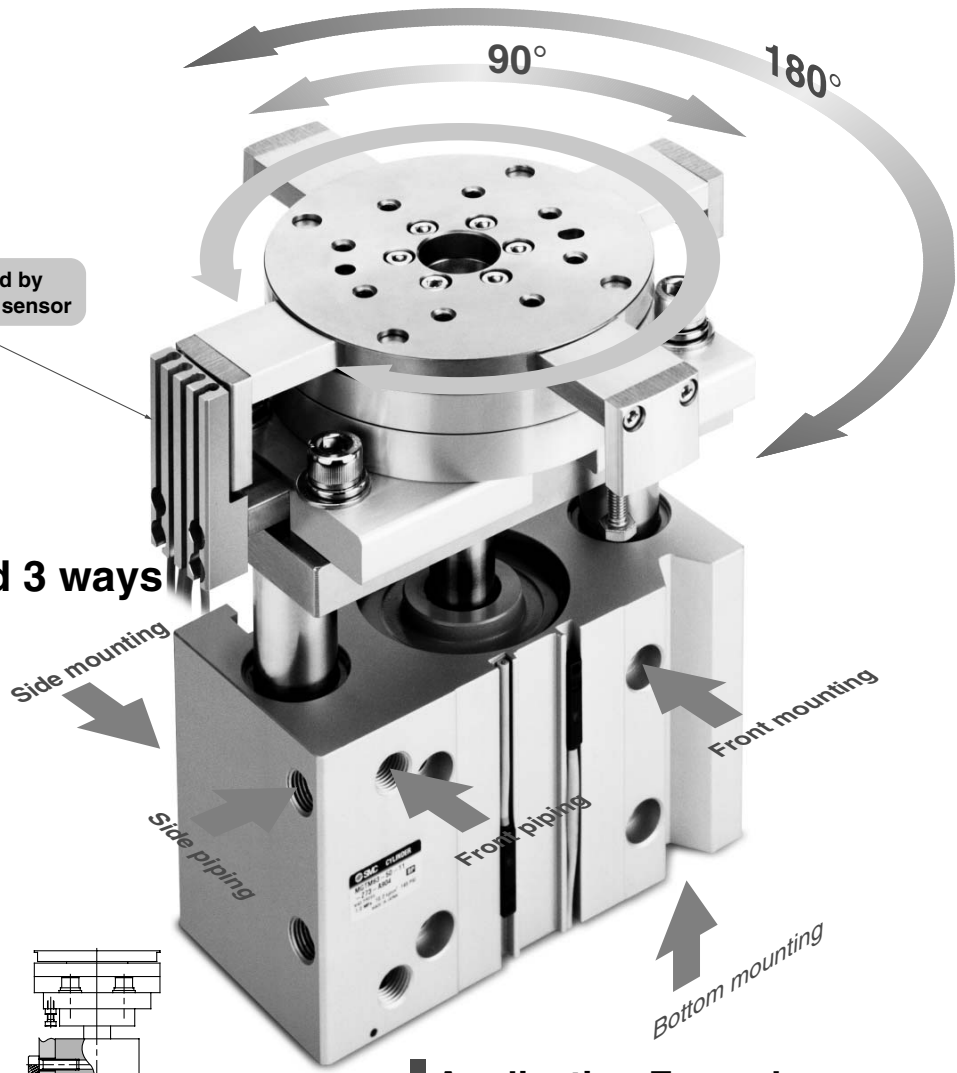
Cylinder with Turntable

Series *MGT*

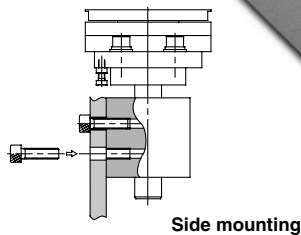
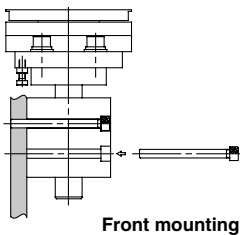
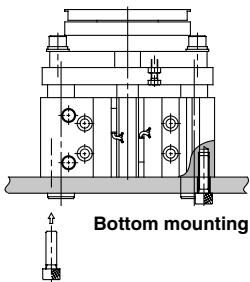
ø63, ø80, ø100

Flat cylinder with guide (Series MGP) and manual turntable combination
 High precision bearings for smooth turning return movement
 Table unit has positioning mechanisms for each 90° and 180° of rotation

Rotation position is detected by provision of an auto switch sensor

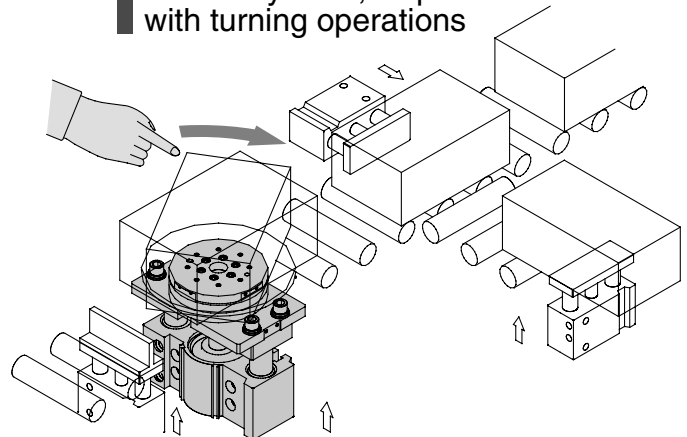


Can be mounted 3 ways



Application Example

Assembly lines, inspection lines etc. with turning operations



Series Variations

| Model | Bearing type | Bore size (mm) | Standard stroke (mm) |
|-------|----------------------|----------------|-------------------------------------|
| MGTM | Slide bearing | 63 | 25, 50, 75, 100, 125, 150, 175, 200 |
| | | 80 | |
| MGTL | Ball bushing bearing | 100 | |

Cylinder with Turntable

Series MGT

ø63, ø80 ø100

How to Order

MGT M 63 50 11 Y59A S A93 S

Guide rod bearing type

| | |
|---|----------------------|
| M | Slide bearing |
| L | Ball bushing bearing |

Bore size

| | |
|-----|--------|
| 63 | 63 mm |
| 80 | 80 mm |
| 100 | 100 mm |

Stroke (mm)
Refer to "Standard Stroke" on page 8-24-4.

Table position detector hardware

| Symbol | Positioning angle | Switch bracket | Position detector arms | | | |
|--------|-------------------|----------------|------------------------|---|---|---|
| | | | a | b | c | d |
| 10 | 90° | X | X | X | X | X |
| 11 | | O | O | O | O | O |
| 12 | | O | O | O | O | X |
| 13 | | O | O | X | O | X |
| 14 | | O | O | O | X | X |
| 15 | O | O | X | X | X | |
| 20 | 180° | X | X | X | X | X |
| 23 | | O | O | X | O | X |
| 25 | | O | O | X | X | X |

Table unit/ Auto switch

| | |
|-----|---------------------|
| Nil | Without auto switch |
|-----|---------------------|

* For the applicable auto switch model, refer to the table below.

Table unit/ Number of auto switches

| | |
|---|--------|
| S | 1 pc. |
| 2 | 2 pcs. |
| 3 | 3 pcs. |
| 4 | 4 pcs. |

Cylinder unit/ Auto switch

| | |
|-----|---------------------|
| Nil | Without auto switch |
|-----|---------------------|

* For the applicable auto switch model, refer to the table below.

Cylinder unit/ Number of auto switches

| | |
|-----|--------|
| Nil | 2 pcs. |
| S | 1 pc. |

- MX
- MTS
- MY
- CY
- MG
- CX
- D-
- X
- 20-
- Data

Cylinder Unit/Applicable Auto Switch

| Type | Special functions | Electrical entry | Indicator light | Wiring (Output) | Load voltage | | Auto switch model | | Lead wire length (m) | | | Applicable load | | |
|--------------------|--|------------------|-----------------|-----------------|--------------|-------|----------------------------|---------|----------------------|-------|-------|-----------------|------------|-----------|
| | | | | | DC | AC | Electrical entry direction | | 0.5 (Nil) | 3 (L) | 5 (Z) | IC circuit | Relay PLC | |
| | | | | | | | Perpendicular | In-line | | | | | | |
| Reed switch | — | Grommet | Yes | 3-wire | — | 5 V | — | Z76 | ● | ● | — | IC circuit | — | |
| | | | | 2-wire | 24 V | 12 V | 100 V | — | Z73 | ● | ● | ● | — | Relay PLC |
| | | | | | 5 V | 100 V | — | Z80 | ● | ● | — | IC circuit | — | |
| Solid state switch | — | Grommet | Yes | 3-wire (NPN) | 24 V | 5 V | — | Y69A | Y59A | ● | ● | ○ | IC circuit | Relay PLC |
| | | | | 3-wire (PNP) | | 12 V | | Y7PV | Y7P | ● | ● | ○ | IC circuit | |
| | | | | 2-wire | | 12 V | | Y69B | Y59B | ● | ● | ○ | — | |
| | | | | 3-wire (NPN) | | 5 V | | Y7NWV | Y7NW | ● | ● | ○ | IC circuit | |
| | | | | 3-wire (PNP) | | | | 12 V | Y7PWV | Y7PW | ● | ● | ○ | |
| | 2-wire | 12 V | Y7BWV | Y7BW | ● | ● | ○ | — | | | | | | |
| | Diagnostic indication (2 color indication) | Grommet | Yes | 2-wire | 24 V | 12 V | — | — | — | — | — | — | — | |

* Lead wire length symbols:
0.5 m Nil (Ex.) Y69B
3 m L Y69BL
5 m Z Y69BZ

** Solid state auto switches marked with a "○" are manufactured upon receipt of order.

*** Refer to page 8-30-1 for detailed auto switch specifications.

Table Unit/Applicable Auto Switch

| Type | Special functions | Electrical entry | Indicator light | Wiring (Output) | Load voltage | | Auto switch model | | Lead wire* length (m) | | Applicable load | |
|--------------------|-------------------|------------------|-----------------|-----------------|--------------|-----------|----------------------------|------|-----------------------|-------|-----------------|-----------|
| | | | | | DC | AC | Electrical entry direction | | 0.5 (Nil) | 3 (L) | IC circuit | Relay PLC |
| | | | | | | | In-line | — | | | | |
| Reed switch | — | Grommet | No | 2-wire | 24 V | 5 V, 12 V | 100 V or less | A90 | ● | ● | IC circuit | Relay PLC |
| | | | | | | 12 V | 100 V | A93 | ● | — | — | |
| | | | | | | 5 V | — | A96 | ● | ● | IC circuit | |
| Solid state switch | — | Grommet | Yes | 3-wire (NPN) | 24 V | 12 V | — | M9N | ● | ● | — | Relay PLC |
| | | | | 3-wire (PNP) | | | | M9P | ● | ● | | |
| | | | | 2-wire | | | | M9B | ● | ● | | |
| | | | | 3-wire (NPN) | | | | F9NW | ● | ● | | |
| | | | | 3-wire (PNP) | | | | F9PW | ● | ● | | |
| | | | | 2-wire | | | | F9BW | ● | ● | | |

* Lead wire length symbols:
0.5 m Nil (Ex.) A93
3 m L A93L

** Refer to pages 8-30-1 for detailed auto switch specifications.

Series MGT



Model

| Model | Bearing type | Bore size (mm) | Applicable auto switch | | | |
|-------------|----------------------|----------------|------------------------|--------------------|------------------------------|------------------------------|
| | | | Cylinder | | Turntable | |
| | | | Reed switch | Solid state switch | Reed switch | Solid state switch |
| MGTM | Slide bearing | 63 | D-Z7 type | D-Y5 type | D-A9 type ^{Note 1)} | D-F9 type ^{Note 1)} |
| | | 80 | D-Z8 type | D-Y6 type | | |
| MGTL | Ball bushing bearing | 100 | | D-Y7 type | | |

Note 1) Vertical outlet types cannot be mounted.

Specifications

1 MPa = 10.2 kgf/cm²

| | |
|------------------------------|--|
| Action | Double acting |
| Fluid | Air |
| Proof pressure | 1.5 MPa {15.3 kgf/cm ² } |
| Maximum operating pressure | 1.0 MPa {10.2 kgf/cm ² } |
| Minimum operating pressure | 0.1 MPa {1.0 kgf/cm ² } |
| Ambient & fluid temperatures | -10 to 60°C |
| Piston speed | 50 to 400 mm/s |
| Bumper | Rubber bumper on both ends |
| Lubrication | Non-lube |
| Stroke length tolerance | +1.5 0 mm |
| Table rotation system | Manual type |
| Table rotation direction | Right, left, free repetitive rotation |
| Table angle of rotation | Quarter circle 90°, half circle 180°, with positioning mechanism |

Standard Stroke

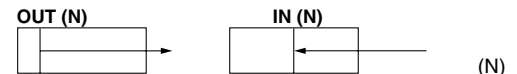
| Model | Bore size (mm) | Standard strokes (mm) |
|-------------|----------------|-----------------------|
| MGTM | 63 | 25, 50, 75, 100, 125, |
| | 80 | |
| MGTL | 100 | 150, 175, 200 |

Intermediate strokes

Intermediate strokes (in 5 mm increments) other than the standard strokes are made by installing spacers of 5, 10, 15 and 20 mm widths.

(Ex.) A 1.MGTM63-35st is made by installing a 15 mm spacer inside a MGTM63-50st, however the overall length will be the same as the 50st.

Theoretical Output



| Bore size (mm) | Rod size (mm) | Actuation direction | Piston area (mm ²) | Operating pressure (MPa) | | | | | | | | | |
|----------------|---------------|---------------------|--------------------------------|--------------------------|------|------|------|------|------|------|------|------|--|
| | | | | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | |
| 63 | 20 | OUT | 3117 | 623 | 935 | 1247 | 1559 | 1870 | 2182 | 2494 | 2805 | 3117 | |
| | | IN | 2803 | 561 | 841 | 1121 | 1402 | 1682 | 1962 | 2242 | 2523 | 2803 | |
| 80 | 25 | OUT | 5027 | 1005 | 1508 | 2011 | 2514 | 3016 | 3519 | 4022 | 4524 | 5027 | |
| | | IN | 4536 | 907 | 1361 | 1814 | 2268 | 2722 | 3175 | 3629 | 4082 | 4536 | |
| 100 | 30 | OUT | 7854 | 1571 | 2356 | 3142 | 3927 | 4712 | 5498 | 6283 | 7069 | 7854 | |
| | | IN | 7147 | 1429 | 2144 | 2859 | 3574 | 4288 | 5003 | 5718 | 6432 | 7147 | |

1 N: Approx. 0.102 kgf 1 MPa: Approx. 1.02 kgf/cm²

Note) Theoretical output (N) = Pressure (MPa) x Piston area (mm²)

Additional Bracket Weight

(kg)

| Bore size (mm) | Symbols for table unit position detector bracket | | | | | |
|----------------|--|------|------|------|------|------|
| | 10 | 11 | 12 | 13 | 14 | 15 |
| | 20 | — | — | 23 | — | 25 |
| 63 | 0 | 0.21 | 0.16 | 0.12 | 0.12 | 0.08 |
| 80 | 0 | 0.24 | 0.19 | 0.14 | 0.13 | 0.08 |
| 100 | 0 | 0.25 | 0.19 | 0.14 | 0.14 | 0.09 |

MGTM63 to 100 (Slide bearing)

(kg)

| Bore size (mm) | Model | Standard stroke (mm) | | | | | | | |
|----------------|----------------|----------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | | 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 |
| 63 | MGTM63 | 6.96 (4.78) | 7.81 (5.12) | 8.57 (5.38) | 9.32 (5.63) | 10.08 (5.88) | 10.83 (6.14) | 11.59 (6.39) | 13.10 (6.90) |
| 80 | MGTM80 | 12.07 (9.29) | 13.31 (9.96) | 14.25 (10.33) | 15.18 (10.71) | 16.12 (11.08) | 17.06 (11.46) | 18.00 (11.83) | 19.87 (12.58) |
| 100 | MGTM100 | (17.83) (13.51) | (19.56) (14.45) | 20.89 (14.99) | 22.22 (15.53) | 23.55 (16.07) | 24.88 (16.60) | 26.21 (17.14) | 28.87 (18.22) |

MGTL63 to 100 (Ball bushing bearing)

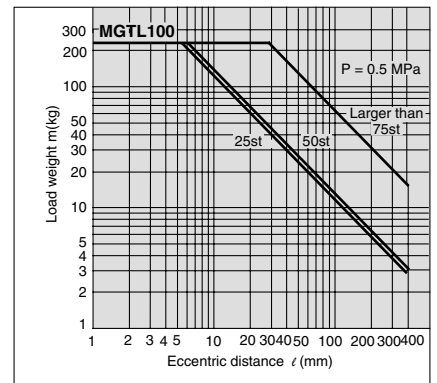
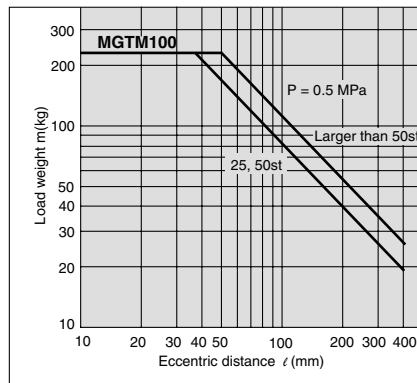
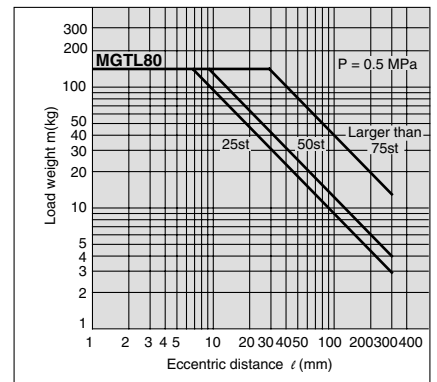
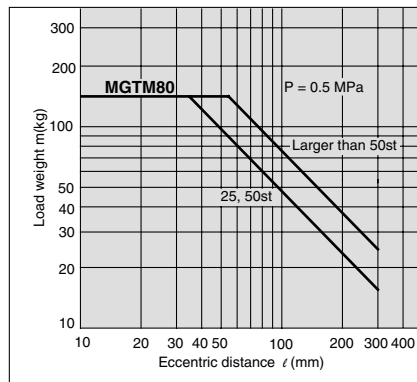
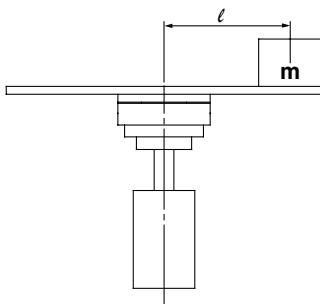
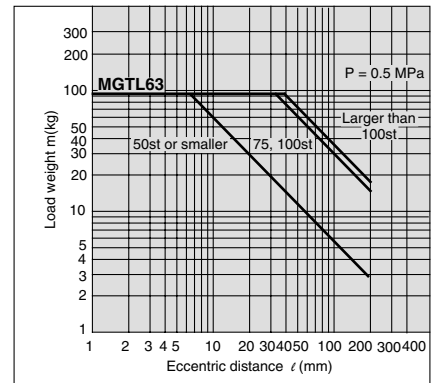
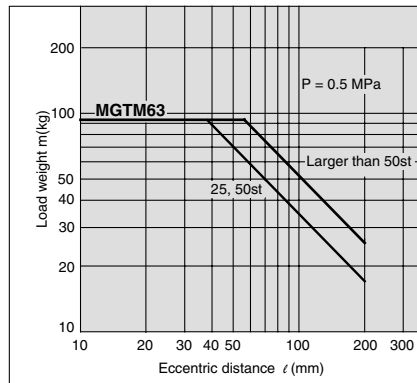
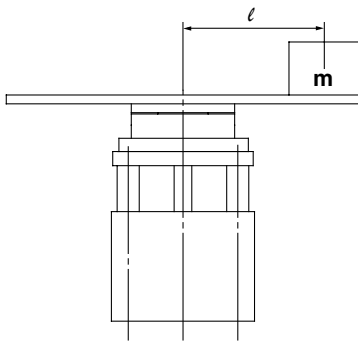
(kg)

| Bore size (mm) | Model | Standard stroke (mm) | | | | | | | |
|----------------|----------------|----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | | 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 |
| 63 | MGTL63 | 6.62 (4.33) | 7.49 (4.61) | 8.15 (4.80) | 8.91 (5.08) | 9.57 (5.27) | 10.24 (5.45) | 10.90 (5.64) | 12.23 (6.01) |
| 80 | MGTL80 | 12.03 (8.92) | 13.33 (9.44) | 14.15 (9.73) | 14.97 (10.02) | 15.79 (10.31) | 16.61 (10.60) | 17.43 (10.89) | 19.07 (11.46) |
| 100 | MGTL100 | 17.53 (12.84) | 19.33 (13.62) | 20.51 (14.04) | 21.69 (14.46) | 22.87 (14.87) | 24.04 (15.29) | 25.22 (15.70) | 27.58 (16.54) |

Numbers inside () indicate the weight of moving parts.

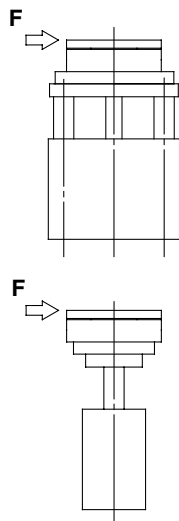
Operating Conditions

Allowable eccentric load



- MX
- MTS
- MY
- CY
- MG
- CX
- D-
- X
- 20-
- Data

Allowable side load

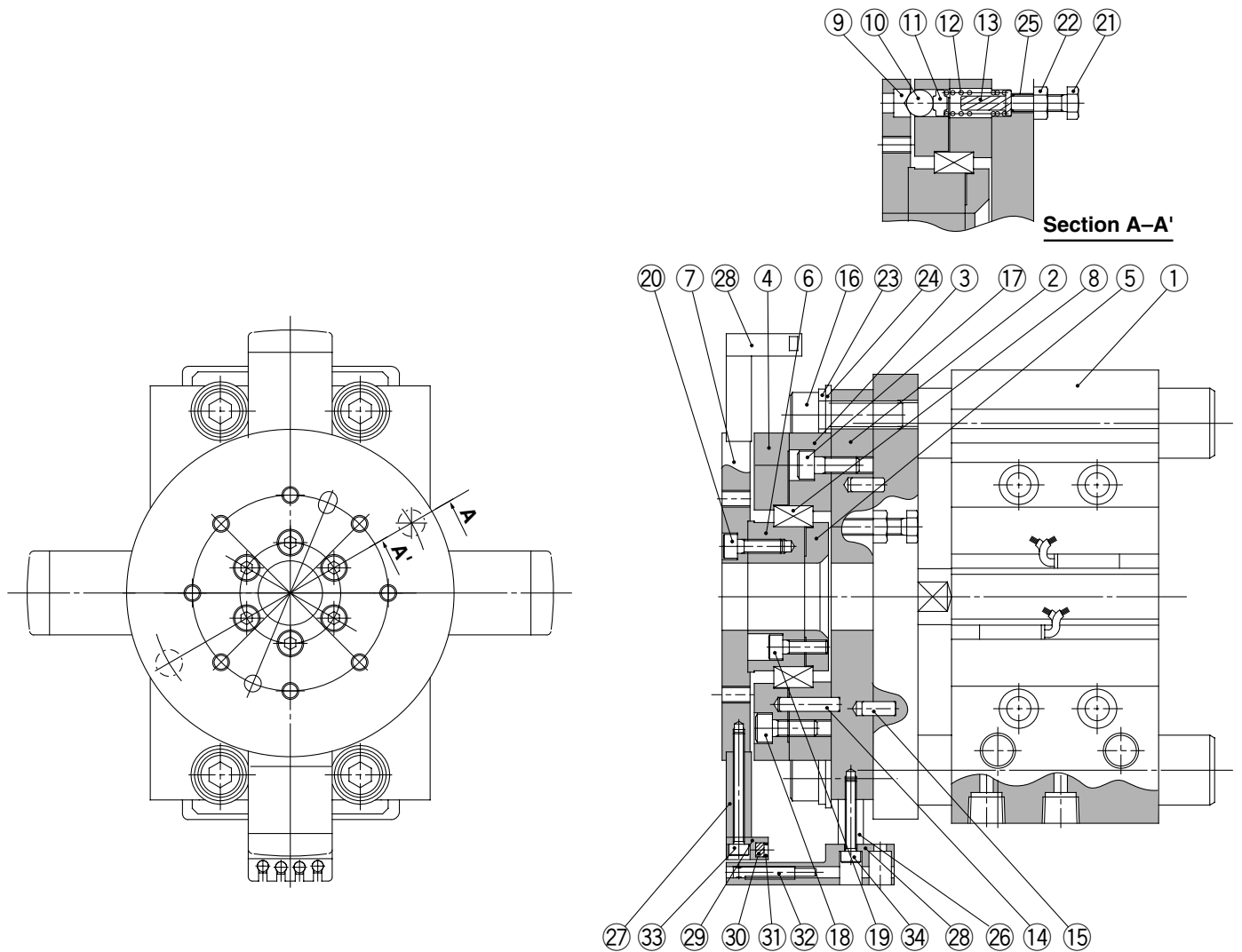


F(N) 1 N: Approx. 0.102 kgf

| Bore size (mm) | Model | Stroke (mm) | | | | | | | |
|----------------|-------|-------------|-----|-----|-----|-----|-----|-----|-----|
| | | 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 |
| 63 | MGTM | 204 | 178 | 212 | 193 | 176 | 162 | 151 | 140 |
| | MGTL | 143 | 127 | 186 | 170 | 243 | 226 | 212 | 199 |
| 80 | MGTM | 250 | 221 | 291 | 267 | 246 | 228 | 213 | 199 |
| | MGTL | 62 | 154 | 255 | 237 | 220 | 205 | 192 | 180 |
| 100 | MGTM | 356 | 321 | 382 | 353 | 328 | 307 | 288 | 271 |
| | MGTL | 114 | 153 | 335 | 313 | 292 | 274 | 257 | 242 |

Series MGT

Construction



Component Parts

| No. | Description | Material | Note |
|-----|---------------------------|------------------------------------|---------------------|
| ① | Flat cylinder w/turntable | MGTM | MGPM63 to 100-□-□ |
| | | MGTL | MGPL63 to 100-□-□ |
| ② | Guide plate | Aluminum alloy | White anodized |
| ③ | Bearing guide A | Aluminum alloy | White anodized |
| ④ | Bearing guide B | Aluminum alloy | White anodized |
| ⑤ | Bearing guide C | Aluminum alloy | Chromated |
| ⑥ | Bearing guide D | Aluminum alloy | Chromated |
| ⑦ | Notch table | Carbon steel | Nickel plated |
| ⑧ | Bearing | — | |
| ⑨ | Notch ring | Carbon steel | Hard zinc chromated |
| ⑩ | Steel ball | High carbon chromium bearing steel | |
| ⑪ | Ball cap | Stainless steel | |
| ⑫ | Return spring | Piano wire | Zinc chromated |

Component Parts (Position detector bracket)

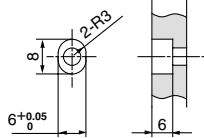
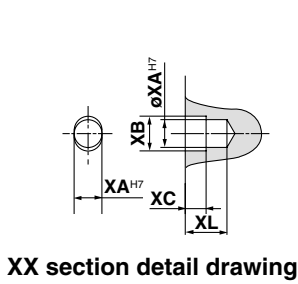
| No. | Description | Material | Note |
|-----|-------------------------------|-------------------------|----------------|
| ⑫ | Magnet base A | Aluminum alloy | White anodized |
| ⑬ | Magnet base B | Aluminum alloy | White anodized |
| ⑭ | Switch holder | Aluminum alloy | White anodized |
| ⑮ | Magnet holder | Aluminum alloy | White anodized |
| ⑯ | Magnet | Rare earth magnet | |
| ⑰ | Retaining ring | Carbon tool steel | |
| ⑱ | Auto switch | — | D-A9 type |
| ⑲ | Hexagon socket head cap screw | Chrome molybdenum steel | Nickel plated |
| ⑳ | Hexagon socket head cap screw | Chrome molybdenum steel | Nickel plated |

Note) Please refer to the page 8-19-8 for details on components and replaceable parts for flat cylinders with guides (MGPM, MGPL).

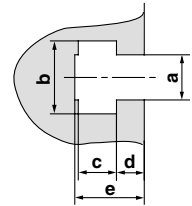
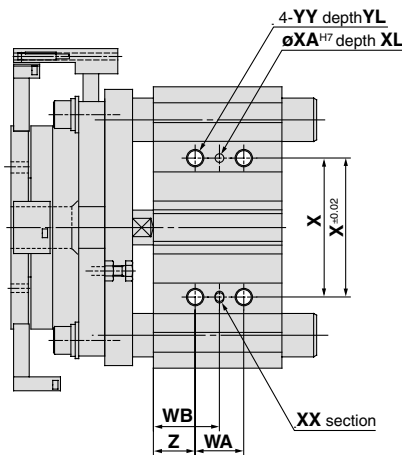
| No. | Description | Material | Note |
|-----|-------------------------------|------------------------------------|---------------|
| ⑬ | Spring guide | Carbon steel | |
| ⑭ | Parallel pin | High carbon chromium bearing steel | |
| ⑮ | Parallel pin | High carbon chromium bearing steel | |
| ⑯ | Hexagon socket head cap screw | Chrome molybdenum steel | Nickel plated |
| ⑰ | Hexagon socket head cap screw | Chrome molybdenum steel | Nickel plated |
| ⑱ | Hexagon socket head cap screw | Chrome molybdenum steel | Nickel plated |
| ⑲ | Hexagon socket head cap screw | Chrome molybdenum steel | Nickel plated |
| ⑳ | Hexagon socket head cap screw | Chrome molybdenum steel | Nickel plated |
| ㉑ | Hexagon bolt | Chrome molybdenum steel | Nickel plated |
| ㉒ | Hexagon nut | Carbon steel | Nickel plated |
| ㉓ | Spring washer | Steel wire | Nickel plated |
| ㉔ | Plain washer | Carbon wire | Nickel plated |
| ㉕ | Helical insert | Stainless steel | |

Cylinder with Turntable Series MGT

Dimensions

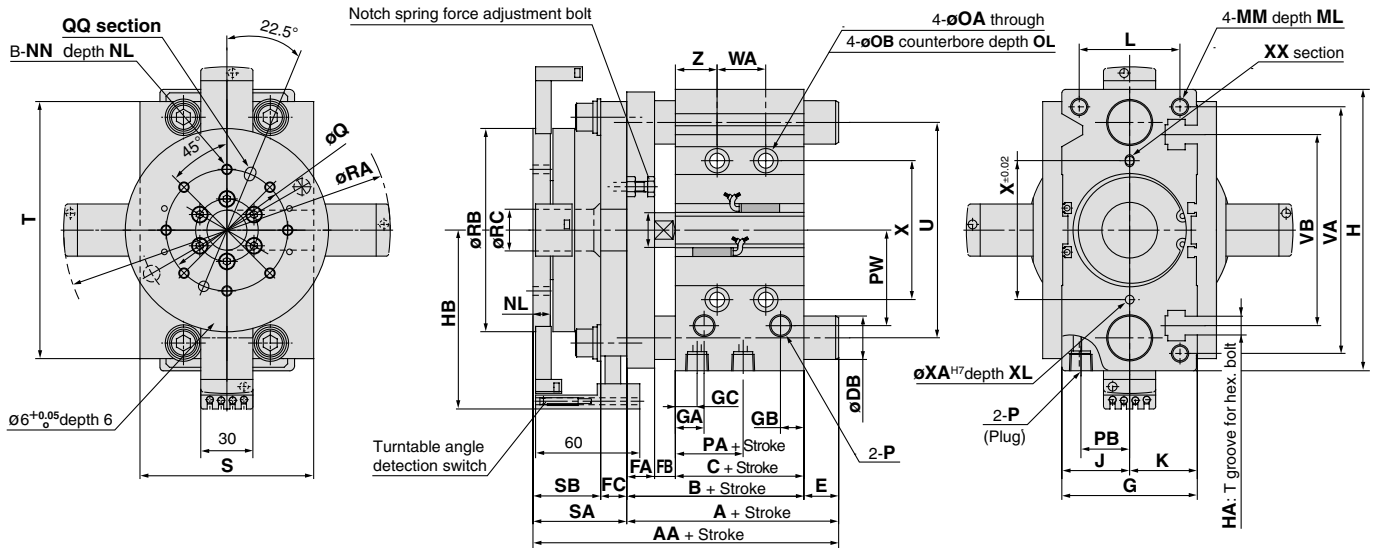


QQ section detail drawing



| Bore size (mm) | a | b | c | d | e |
|----------------|------|------|------|----|------|
| 63 | 11 | 17.8 | 10 | 7 | 18.5 |
| 80 | 13.3 | 20.3 | 12 | 8 | 22.5 |
| 100 | 15.3 | 23.3 | 13.5 | 10 | 30 |

T groove dimensions



| Bore size (mm) | Standard stroke (mm) | B | C | DA | FA | FB | FC | G | GA | GB | GC | H | HA | HB | J | K | L | MM | ML | NN | NL | OA |
|----------------|----------------------|------|------|----|----|----|----|-------|------|------|------|-----|-----|-------|------|----|----|------------|----|-----------|----|------|
| 63 | 25, 50, 75, | 77 | 49 | 20 | 16 | 12 | 15 | 78 | 16.5 | 13.5 | 16.5 | 162 | M10 | 103 | 39 | 39 | 58 | M10 X 1.5 | 22 | M6 X 1.0 | 10 | 8.6 |
| 80 | 100, 125, 150, | 96.5 | 56.5 | 25 | 22 | 18 | 15 | 91.5 | 19 | 15.5 | 14.5 | 202 | M12 | 121.5 | 45.5 | 46 | 54 | M12 X 1.75 | 26 | M8 X 1.25 | 12 | 10.6 |
| 100 | 175, 200 | 116 | 66 | 30 | 25 | 25 | 20 | 111.5 | 23 | 19 | 18 | 240 | M14 | 145 | 55.5 | 56 | 62 | M14 X 2.0 | 32 | M8 X 1.25 | 15 | 12.5 |

| Bore size (mm) | OB | OL | P | PA | PB | PW | Q | RA | RB | RC | S | SA | SB | T | U | VA | VB | WA | | | WB | | |
|----------------|------|----|-------|------|------|----|-----|-----|-----|----|-----|----|----|-----|-----|-----|-----|------|---------------|-------------------|------|---------------|-------------------|
| | | | | | | | | | | | | | | | | | | 25st | 50, 75, 100st | Larger than 100st | 25st | 50, 75, 100st | Larger than 100st |
| 63 | 14 | 9 | Rc1/4 | 14 | 28 | 55 | 70 | 188 | 117 | 24 | 100 | 54 | 39 | 148 | 124 | 142 | 110 | 52 | 128 | 38 | 50 | 88 | |
| 80 | 17.5 | 8 | Rc3/8 | 14.5 | 25.5 | 74 | 80 | 225 | 128 | 24 | 125 | 56 | 41 | 198 | 156 | 180 | 140 | 28 | 52 | 128 | 42 | 54 | 92 |
| 100 | 20 | 8 | Rc3/8 | 17.5 | 32.5 | 89 | 100 | 272 | 168 | 35 | 150 | 71 | 51 | 236 | 188 | 210 | 166 | 48 | 72 | 148 | 35 | 47 | 85 |

| Bore size (mm) | X | XA | XB | XC | XL | YY | YL | Z |
|----------------|-----|----|----|----|----|------------|----|----|
| 63 | 80 | 5 | 6 | 4 | 8 | M10 X 1.5 | 20 | 24 |
| 80 | 100 | 6 | 7 | 5 | 10 | M12 X 1.75 | 24 | 28 |
| 100 | 124 | 6 | 7 | 5 | 10 | M14 X 2.0 | 28 | 11 |

MGTM (Slide bearing)

| Bore size (mm) | AA | | | | BD | E | |
|----------------|---------|------------------|---------|------------------|----|---------|------------------|
| | 25.50st | Larger than 50st | 25.50st | Larger than 50st | | 25.50st | Larger than 50st |
| 63 | 160.5 | 172 | 106.5 | 118 | 25 | 29.5 | 41 |
| 80 | 171 | 198 | 115 | 142 | 30 | 18.5 | 45.5 |
| 100 | 208 | 233 | 137 | 162 | 36 | 21 | 46 |

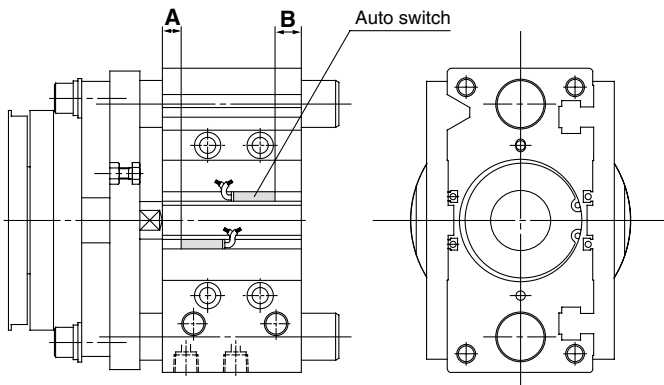
MGTL (Ball bushing bearing)

| Bore size (mm) | AA | | | | | A | | | | DB | E | | | | |
|----------------|-------|------|-------------|-------------------|-------------------|------|------|-------------|-------------------|------|------|------|-------------|-------------------|--|
| | 25st | 50st | 75st, 100st | Larger than 100st | Larger than 100st | 25st | 50st | 75st, 100st | Larger than 100st | | 25st | 50st | 75st, 100st | Larger than 100st | |
| 63 | 147 | 168 | 188 | 93 | 114 | 134 | 20 | 16 | 37 | 57 | | | | | |
| 80 | 165.5 | 186 | 216 | 109.5 | 130 | 160 | 25 | 13 | 33.5 | 63.5 | | | | | |
| 100 | 192 | 218 | 251 | 121 | 147 | 180 | 30 | 5 | 31 | 64 | | | | | |

Series MGT

Proper Auto Switch Mounting Position (Detection at stroke end)

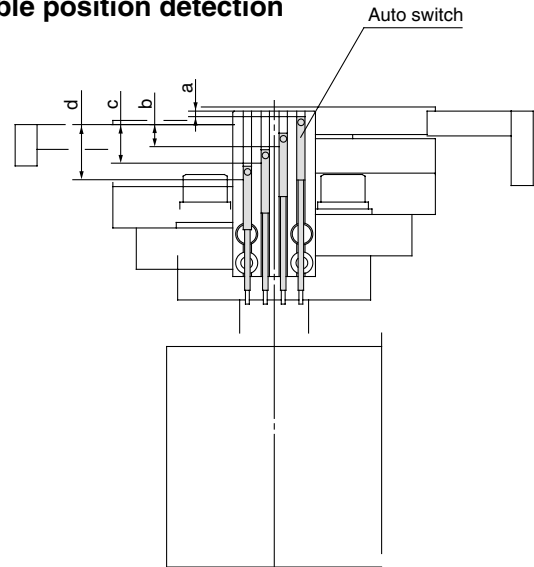
Proper auto switch mounting position for cylinder (stroke end)



Proper Mounting Position (mm)

| Bore size (mm) | A | B |
|----------------|------|------|
| 63 | 10 | 14 |
| 80 | 13 | 18.5 |
| 100 | 17.5 | 23.5 |

Proper auto switch mounting position for table position detection



Proper Mounting Position (mm)

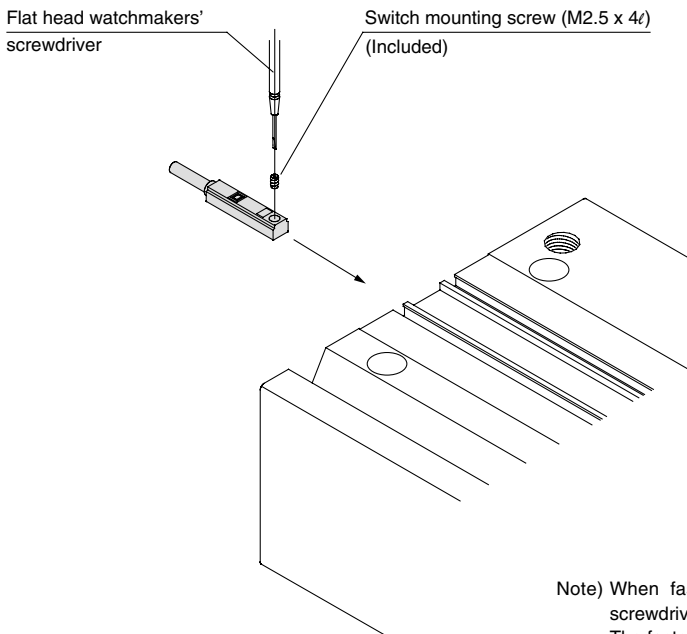
| | a | b | c | d |
|---------------|---|----|----|----|
| D-A9 type | 2 | 8 | 14 | 20 |
| D-M9 type | 6 | 12 | 18 | 24 |
| D-F9 □ W type | 5 | 11 | 17 | 23 |

In order that adjacent switches do not misoperate, they should be set within ± 1 mm of the proper mounting positions indicated in the table above.

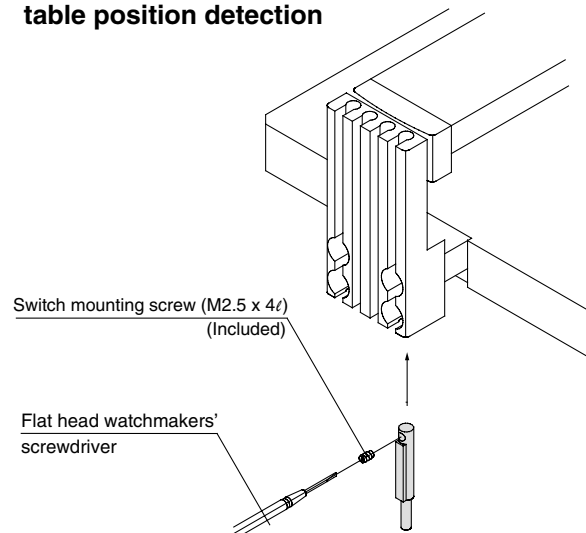
Mounting of Auto Switch

When mounting an auto switch, insert it into the cylinder's switch groove from the direction shown in the figure below. After setting it in the mounting position, use a flat head watchmakers' screwdriver to secure it with the mounting screw which is included.

Mounting of auto switches for cylinder



Mounting of auto switch for table position detection



Note) When fastening the auto switch mounting screw, use a watchmakers' screwdriver with a grip diameter of 5 to 6 mm. The fastening torque should be 0.05 to 0.1 N·m (0.51 to 1.02 kgf·cm). As a rule, it should be turned about 90° past the position at which tightening can be felt.



Series **MGT**

Specific Product Precautions

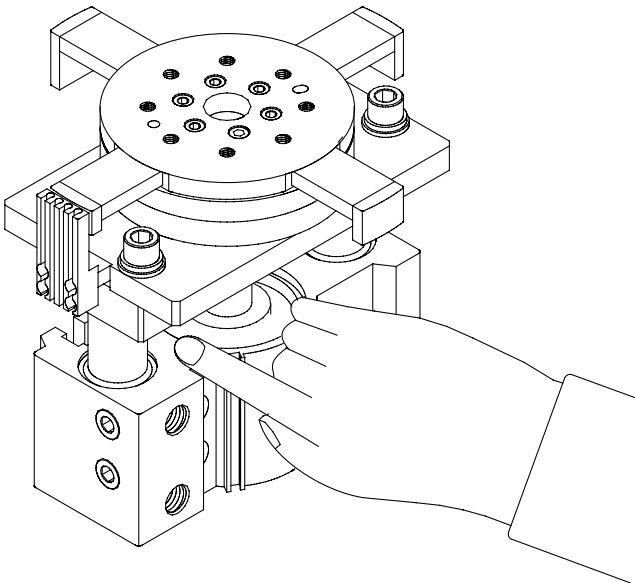
Be sure to read before handing.

Mounting

Warning

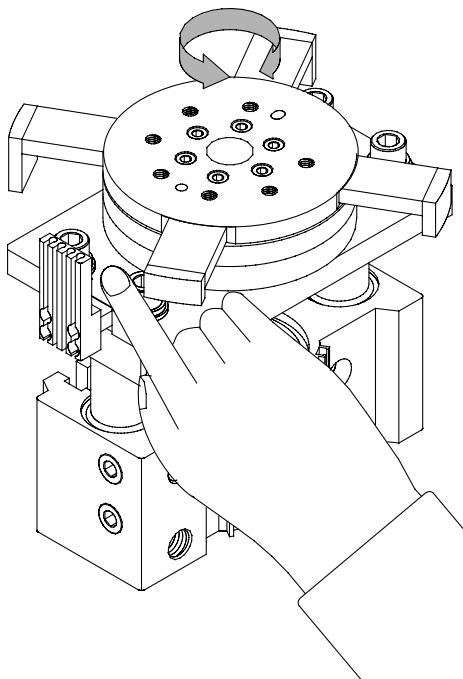
1. Do not put hands or fingers between the plate and body.

Care should be taken that hands or fingers do not get caught in the space between the cylinder body and the plate when air pressure is applied.



2. When rotating the turntable, take care that hands or fingers are not caught by the position detector auto switch bracket.

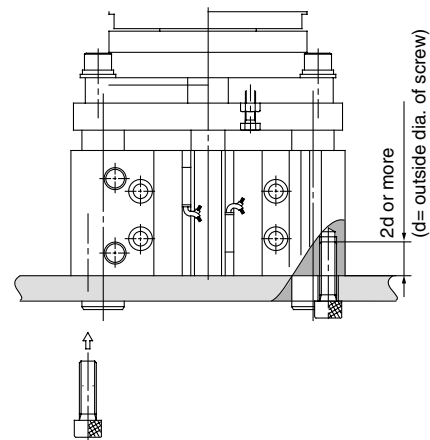
Because there is a danger of hands or fingers getting caught between the switch bracket and one of the magnet arms, please use caution when the turntable is being rotated.



Mounting

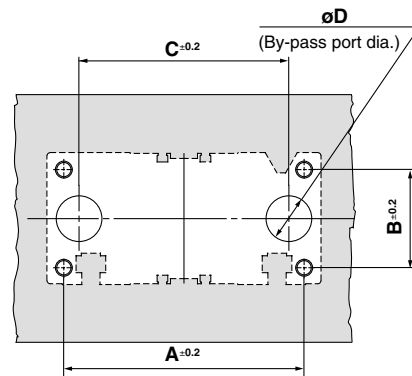
Caution

1. Do not scratch or dent the sliding parts of the piston rod and guide rods.
Damage to seals may cause air leaks or faulty operation.
2. In cases where the cylinder will be bottom mounted and shock will be delivered during use, the mounting bolts should be inserted to a depth of 2d or more.



3. If the cylinder is to be bottom mounted, bypass ports should be provided for the guide rods.

Since the guide rods protrude from the bottom of the cylinder at the end of the retracting stroke, in cases where the cylinder is to be bottom mounted it is necessary to provide by-pass ports for the guide rods in the mounting surface, as well as holes for the hexagon socket head screws which are used for mounting.



| Bore size (mm) | A (mm) | B (mm) | C (mm) | D (mm) | | Hexagon socket head mounting screws |
|----------------|--------|--------|--------|--------|------|-------------------------------------|
| | | | | MGPM | MGPL | |
| 63 | 142 | 58 | 124 | 27 | 22 | M10 x 1.5 |
| 80 | 180 | 54 | 156 | 33 | 28 | M12 x 1.75 |
| 100 | 210 | 62 | 188 | 39 | 33 | M14 x 2.0 |

MX

MTS

MY

CY

MG

CX

D-

-X

20-

Data