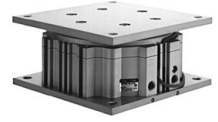


# Series 10-MGF

ø40, ø63, ø100 Guide Table

## How to Order



**10 - M G F 63 [ ] - 50 - Y59B [ ]**

**Clean series**

|    |             |
|----|-------------|
| 10 | Relief type |
|----|-------------|

**Bore size (mm)**

| Symbol | Type | Bore size      |
|--------|------|----------------|
| Nil    | Rc   |                |
| TN     | NPT  | ø40, ø63, ø100 |
| TF     | G    |                |

**Port type**

**Number of auto switches**

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

**Auto switch**

| Nil         | Without auto switch |
|-------------|---------------------|
| Reed switch | Z73                 |
| Solid state | Y59A, Y59B          |

\* The minimum stroke for auto switch mounting and operating range are the same as standard products.

**Cylinder stroke (mm)**

## Model

| Relief type | Model     | Bore size (mm) | Port size | Lubrication | Action        | Standard stroke * (mm) | Auto switch mounting | Cushion           |     |
|-------------|-----------|----------------|-----------|-------------|---------------|------------------------|----------------------|-------------------|-----|
|             |           |                |           |             |               |                        |                      | Rubber            | Air |
|             | 10-MGF40  | 40             | 1/8       | Non-lube    | Double acting | 30, 50, 75, 100        | ○                    | ○<br>(Both sides) | -   |
|             | 10-MGF63  | 63             | 1/4       |             |               |                        |                      |                   |     |
|             | 10-MGF100 | 100            |           |             |               |                        |                      |                   |     |

\* Non-standard intermediate strokes (in 5 mm increments) are available by attaching a spacer of 5, 10, 15, 20 or 25 mm width.

## Specifications

| Item                                 | Bore size(mm)                  |
|--------------------------------------|--------------------------------|
|                                      | 40/63/100                      |
| <b>Proof pressure</b>                | 1.5 MPa                        |
| <b>Maximum operating pressure</b>    | 1.0 MPa                        |
| <b>Minimum operating pressure</b>    | 0.1 MPa                        |
| <b>Ambient and fluid temperature</b> | -10 to 60°C (With no freezing) |
| <b>Piston speed</b>                  | 20 to 200 mm/s                 |
| <b>Stroke length tolerance</b>       | $^{+1.0}_0$ mm                 |
| <b>Grease</b>                        | Fluorine grease                |
| <b>Cleanliness class (ISO class)</b> | Class 4                        |

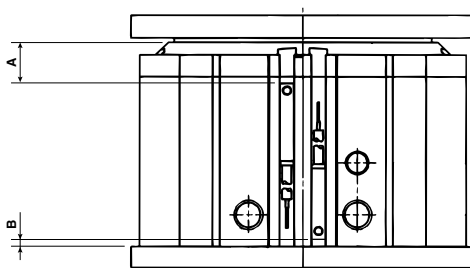
**Auto Switch Specifications** (Refer to the **WEB catalog** for detailed specifications and auto switches not in the following table.)

| Type                    | Auto switch part no. | Load voltage          | Load current range     | Indicator light | Application            |
|-------------------------|----------------------|-----------------------|------------------------|-----------------|------------------------|
| Reed auto switch        | <b>D-Z73</b>         | 24 VDC, 100 VAC       | 5 to 40 mA, 5 to 20 mA | ○               | Relay, PLC             |
| Solid state auto switch | <b>D-Y59B</b>        | 24 VDC (10 to 28 VDC) | 5 to 40 mA             | ○               | 24 VDC Relay, PLC      |
|                         | <b>D-Y59A</b>        | 28 VDC or less        | 40 mA or less          | ○               | IC circuit, Relay, PLC |

Refer to page 889 for the applicable auto switch list.

PLC: Programmable Logic Controller

**Auto Switch Proper Mounting Position (Detection at Stroke End)**



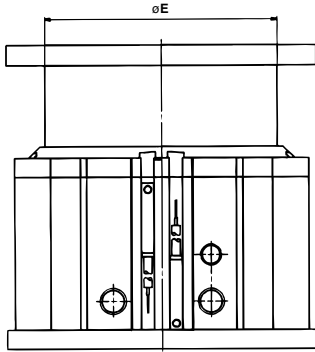
**Proper Mounting Position** (mm)

| Bore size  | A    | B |
|------------|------|---|
| <b>40</b>  | 16   | 0 |
| <b>63</b>  | 27.5 | 0 |
| <b>100</b> | 32.5 | 0 |

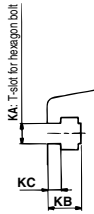
Note) The above mentioned values are indicated as a guide for auto switch mounting positions for stroke end detection. When actually mounting an auto switch, adjust the position after confirming the operating state of the auto switch.

**Dimensions**

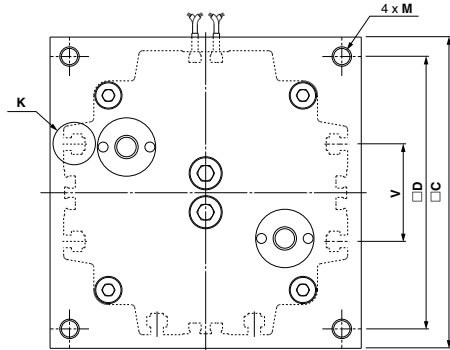
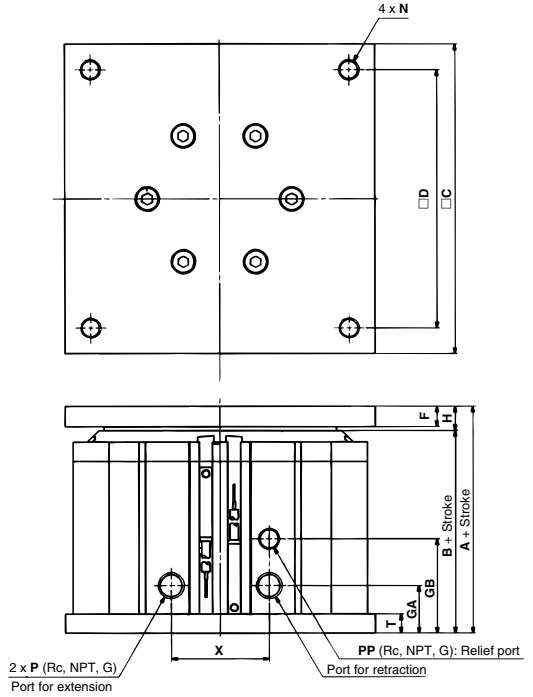
10-MGF40/63/100



When the cylinder is extended



6-K (6 positions)



| Boresize | Standard stroke | A  | B    | C   | D   | E   | F  | GA   | GB   | H    | KA | KB  | KC  | M          | N          | P   | PP  | T  | V  | X  |
|----------|-----------------|----|------|-----|-----|-----|----|------|------|------|----|-----|-----|------------|------------|-----|-----|----|----|----|
| 40       |                 | 58 | 48.5 | 120 | 100 | 90  | 8  | 18.5 | 36.5 | 9.5  | M5 | 8.7 | 3.5 | M8 x 1.25  | M8 x 1.25  | 1/8 | 1/8 | 8  | 40 | 38 |
| 63       | 30, 50, 75, 100 | 73 | 61.5 | 160 | 140 | 120 | 10 | 20   | 38   | 11.5 | M6 | 11  | 4   | M10 x 1.5  | M10 x 1.5  | 1/4 | 1/8 | 10 | 50 | 46 |
| 100      |                 | 78 | 66.5 | 200 | 170 | 160 | 10 | 20   | 38   | 11.5 | M6 | 11  | 4   | M12 x 1.75 | M12 x 1.75 | 1/4 | 1/8 | 10 | 70 | 46 |

(mm)

- Directional Control Valves
- Air Cylinders
- Rotary Actuators
- Air Grippers
- Air Preparation Equipment
- Modular F. R.
- Pressure Control Equipment
- Fittings & Tubing
- Flow Control Equipment
- Pressure Switches/ Pressure Sensors

## ⚠ Specific Product Precautions

Be sure to read this before handling.

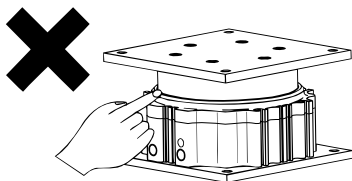
### Selection

#### ⚠ Caution

**1. Operate loads within the range of the operating limits.**  
 Select a load taking into consideration the allowable horizontal loads, rotational torque and eccentric loads that will apply. When used in excess of the applicable limit, eccentric loads applied to the tube guide will cause wear of the guide, increase the guide's deviation range, cause stress cracks and breaks on the mounting bolts, and decrease the life of the cylinder.

**2. Care should be taken to avoid scratches or gouges on the mounting surface of the plate or end plate.**  
 The flatness of the mounting face may deteriorate, the guide's deviation range may increase and the sliding resistance may become greater.

**3. Do not allow hands or fingers near the cylinder during its operation.**  
 Your fingers may be caught between the body and the plate. If you need to come near the cylinder during its operation, install a cover on the cylinder.



**4. Do not bring objects that are sensitive to magnetism near the cylinder.**  
 The magnet is built into the cylinder. Do not bring magnetic disks, cards or tapes near the cylinder. Data may be lost.

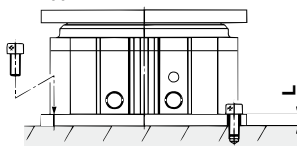
**5. If the cylinder is operated vertically with heavy loads, measures must be taken to prevent rapid extension of the piston rod when starting to operate in the downward direction.**  
 If the cylinder is operated vertically with heavy loads at the same pressure for both upward and downward directions, the starting speed in the downward direction may be higher than the speed controlled with a speed controller. In such cases, use a dual pressure control circuit as a pneumatic circuit.

### Mounting

#### ⚠ Caution

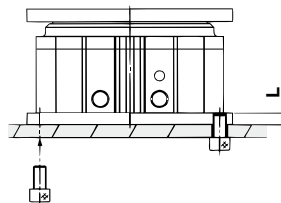
**1. When mounting the cylinder, use screws of appropriate lengths and tighten with proper torque not exceeding the maximum tightening torque.**

##### Mounting from upper side



| Model         | Bolt      | Maximum tightening torque (N·m) | L (mm) |
|---------------|-----------|---------------------------------|--------|
| <b>MGF40</b>  | M6 x 1    | 10                              | 8      |
| <b>MGF63</b>  | M8 x 1.25 | 25                              | 10     |
| <b>MGF100</b> | M10 x 1.5 | 51                              | 10     |

##### Mounting from bottom side



| Model         | Bolt       | Maximum tightening torque (N·m) | L (mm) |
|---------------|------------|---------------------------------|--------|
| <b>MGF40</b>  | M8 x 1.25  | 18                              | 8      |
| <b>MGF63</b>  | M10 x 1.5  | 36                              | 10     |
| <b>MGF100</b> | M12 x 1.75 | 65                              | 10     |