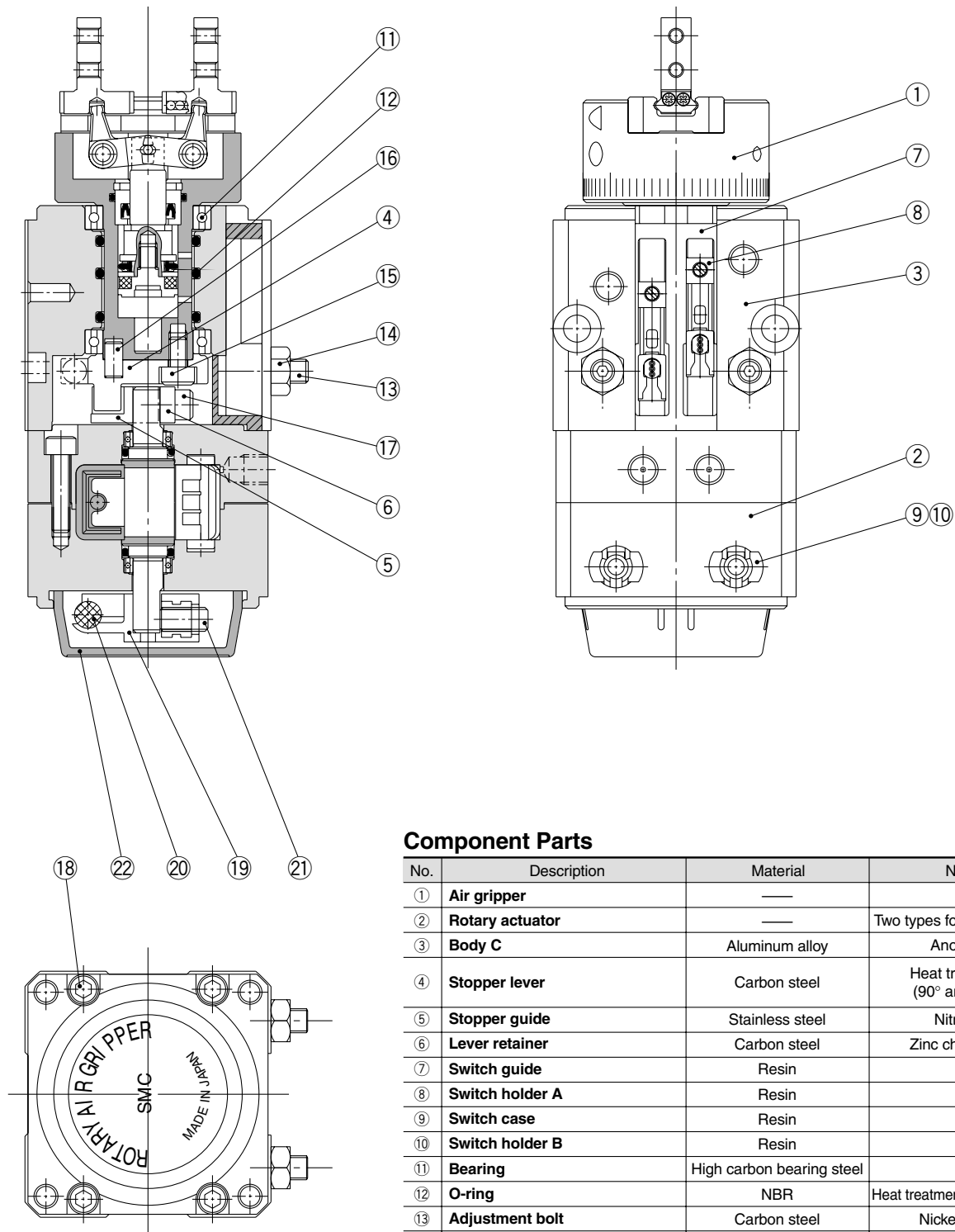


Construction



Component Parts

No.	Description	Material	Note
①	Air gripper	—	
②	Rotary actuator	—	Two types for 90° and 180°
③	Body C	Aluminum alloy	Anodized
④	Stopper lever	Carbon steel	Heat treatment (90° and 180°)
⑤	Stopper guide	Stainless steel	Nitriding
⑥	Lever retainer	Carbon steel	Zinc chromated
⑦	Switch guide	Resin	
⑧	Switch holder A	Resin	
⑨	Switch case	Resin	
⑩	Switch holder B	Resin	
⑪	Bearing	High carbon bearing steel	
⑫	O-ring	NBR	Heat treatment, Nickel plated
⑬	Adjustment bolt	Carbon steel	Nickel plated
⑭	Nut	Carbon steel	Nickel plated
⑮	Hexagon socket head cap screw	Carbon steel	
⑯	Parallel pin	Stainless steel	
⑰	Hexagon socket head cap screw	Stainless steel	
⑱	Hexagon socket head cap screw	Stainless steel	
⑲	Magnet lever	Resin	
⑳	Magnet	—	Nickel plated
㉑	Hexagon socket head set screw	Stainless steel	
㉒	Resin case	Resin	

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X□

MRHQ

MA

D-□



Series MRHQ

Specific Product Precautions 1

Be sure to read before handling. Refer to front matters 38 and 39 for Safety Instructions and pages 358 to 365 for Rotary Actuator, Air Gripper and Auto Switch Precautions.

Selection

⚠ Warning

1. Keep the load energy within the product's allowable energy value.

Operation with a load kinetic energy exceeding the allowable value can cause human injury and/or damage to equipment or machinery. (Refer to "Model Section" procedures in this catalog.)

⚠ Caution

1. When there are load fluctuations, allow a sufficient margin in the actuator torque.

In the case of horizontal mounting (operation with product facing sideways), malfunction may occur due to load fluctuations.

Mounting

⚠ Caution

1. Adjust the rotation angle within the prescribed ranges: $90^\circ \pm 10^\circ$; $180^\circ \pm 10^\circ$ ($\pm 5^\circ$ at end of rotation).

Adjustment outside the prescribed ranges may cause malfunction of the product or failure of switches to operate.

2. Adjust the opening/closing speed of the fingers with a speed controller so that they do not operate any faster than necessary.

When fingers open and close faster than necessary, impact on the fingers and other parts increases, causing poor repeatability when gripping workpieces and danger of an adverse effect on the product's life.

Adjustment of Finger Opening/Closing Speed

Double acting	Install two speed controllers and adjust with meter-out throttling.
Single acting	Install one speed controller and adjust with meter-in throttling. For external gripping – connect to closing port For internal gripping – connect to opening port

3. Adjust the rotation time within the prescribed values using a speed controller. (0.07 to 0.3 s/90°)

Adjustment to a speed slower than 0.3 s/90° can cause sticking and slipping or stopping of operation.

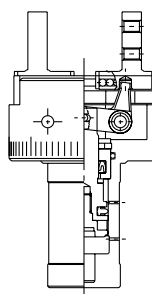
Maintenance

⚠ Caution

1. Gripper unit

Replace a gripper unit. When replacing it follow the gripper unit replacement procedures on the next page. Confirm the correct unit part number.

Gripper unit



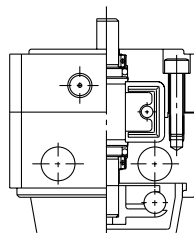
Model	Unit part no.
MRHQ10D	P407090-3D
MRHQ10S	P407090-3S
MRHQ10C	P407090-3C
MRHQ16D	P407060-3D
MRHQ16S	P407060-3S
MRHQ16C	P407060-3C
MRHQ20D	P407080-3D
MRHQ20S	P407080-3S
MRHQ20C	P407080-3C
MRHQ25D	P408080-3D
MRHQ25S	P408080-3S
MRHQ25C	P408080-3C

* A gripper unit includes not only an air gripper, but also three O-rings (12) and three hexagon socket head cap screws (15) as shown in the construction on page 725.

2. Rotary unit

Replace a rotary unit.

Rotary unit



Model	Unit part no.
MRHQ10□- 90S	P406090-2A
MRHQ10□-180S	P406090-2B
MRHQ16□- 90S	P406060-2A
MRHQ16□-180S	P406060-2B
MRHQ20□- 90S	P407080-2A
MRHQ20□-180S	P407080-2B
MRHQ25□- 90S	P408080-2A
MRHQ25□-180S	P408080-2B

* Note that the rotation angle cannot be changed even though the rotary unit has been changed.

For maintenance, order units with a part number suitable for the model being used.

3. O-ring in the body C

((12) O-ring in the construction on page 725: 3 pcs.)

Model	Seal kit part no.
MRHQ10□	MRHQ10S-PS
MRHQ16□	MRHQ16S-PS
MRHQ20□	MRHQ20S-PS
MRHQ25□	MRHQ25S-PS

* Special grease is applied.

* This O-ring is included in the gripper unit.