



# Operation Manual

## PRODUCT NAME

Wedge cam operation slide guide Air gripper

## MODEL / Series / Product Number

MHK2-12\*

MHK2-16\*

MHK2-20\*

MHK2-25\*

MHKL2-12\*

MHKL2-16\*

MHKL2-20\*

MHKL2-25\*

**SMC Corporation**

# Contents

Safety instructions

<b>1. Product specifications</b>	5
1-1. Specifications	5
<b>2. Operating method or operation</b>	6
2-1. Design precautions	6
2-2. Selection	6
2-3. Installation	8
2-4. Piping	14
2-5. Lubrication	14
2-6. Air supply	14
2-7. Operating environment	14
<b>3. Maintenance</b>	15
3-1. Precautions	15
3-2. exploded view	16
3-3. Replacement Procedure	16
3-4. Component Parts/Replacement Parts	18



# Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of "Caution," "Warning" or "Danger." They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)\*1), and other safety regulations.

\*1) ISO 4414: Pneumatic fluid power -- General rules relating to systems

ISO 4413: Hydraulic fluid power -- General rules relating to systems

IEC 60204-1: Safety of machinery -- Electrical equipment of machines (Part 1: General requirements)

ISO 10218: Manipulating industrial robots-Safety

JIS B 8370: General rules and safety requirements for systems and their components

JIS B 8361: General rules and safety requirements for systems and their components

JIS B 9960-1: Safety of machinery-Electrical equipment of machines (Part 1: General requirements)

JIS B 8433: Robots and robotic devices-Safety requirements for industrial robots (Part 1:Robots)

\*2) Occupational Health and Safety Law, etc.



## Caution

**Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

## Warning

**Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

## Danger

**Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

## Warning

### 1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results.

The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product.

This person should also continuously review all specifications of the product referring to its latest catalog information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

### 2. Only personnel with appropriate training should operate machinery and equipment.

The product specified here may become unsafe if handled incorrectly.

The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

### 3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.

1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.

2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.

3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

### 4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.

2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalog.

3. An application which could have negative effects on people, property, or animals requiring special safety analysis.

4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.



# Safety Instructions



## Caution

**The product is provided for use in manufacturing industries.**

The product herein described is basically provided for peaceful use in manufacturing industries.

If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary.

If anything is unclear, contact your nearest sales branch.

## Limited warranty and Disclaimer/Compliance Requirements

The product used is subject to the following "Limited warranty and Disclaimer" and "Compliance Requirements".

Read and accept them before using the product.

### Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.  
Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided.  
This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalog for the particular products.

### Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The export of SMC products or technology from one country to another is governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of an SMC product to another country, ensure that all local rules governing that export are known and followed.

# 1. Product specifications

## 1-1. Specifications

Action	Model	Bore Size	Max.Operating frequency c.p.m.	Opening/closing stroke mm (L <sub>2</sub> -L <sub>1</sub> )	Closed dia.mm (L <sub>1</sub> )	Open dia.mm (L <sub>2</sub> )	Mass
Double acting	MHK2-12D	12	120	4	9	13	75
	MHK2-16D	16		6	14.6	20.6	113
	MHK2-20D	20		10	16	26	235
	MHK2-25D	25		14	19	33	440
Single acting	normally open	MHK2-12S		4	9	13	76
		MHK2-16S		6	14.6	20.6	114
		MHK2-20S		10	16	26	237
		MHK2-25S		14	19	33	443
	normally closed	MHK2-12C		4	9	13	76
		MHK2-16C		6	14.6	20.6	115
		MHK2-20C		10	16	26	237
		MHK2-25C		14	19	33	443
Double acting	MHKL2-12D	12	90	11	9	20	104
	MHKL2-16D	16		14	14.6	28.6	164
	MHKL2-20D	20		18	16	34	312
	MHKL2-25D	25		22	19	41	562
Single acting	normally open	MHKL2-12S		11	9	20	105
		MHKL2-16S		14	14.6	28.6	165
		MHKL2-20S		18	16	34	314
		MHKL2-25S		22	19	41	565
	normally closed	MHKL2-12C		11	9	20	105
		MHKL2-16C		14	14.6	28.6	165
		MHKL2-20C		18	16	34	314
		MHKL2-25C		22	19	41	565

Action	Double acting	Single acting	
		Normally open	Normally closed
Fluid	Air		
Operating pressure (MPa)	0.1 to 0.6	0.25 to 0.6	
Ambient and fluid temperature	-10 to 60℃		
Repeatability (mm)	±0.01		
Lubrication	Not required		
Auto switch (Option)	Solid state auto switch(3-wire,2-wire)		

## 2. Operating method or operation

### 2-1. Design precautions

#### ⚠ Warning

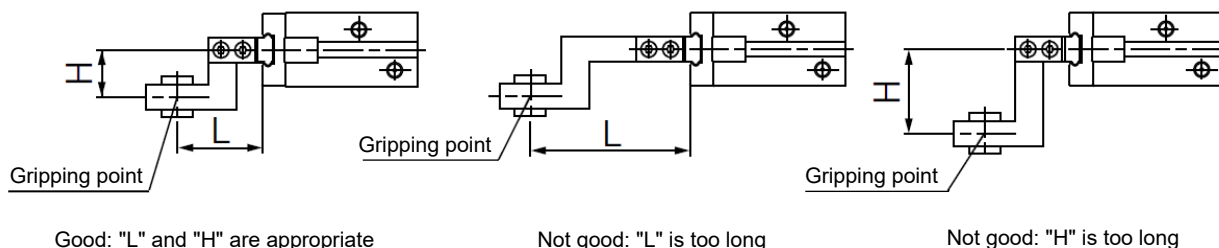
1. The product is designed for use only in compressed air systems. Do not operate at pressures or temperatures, etc., beyond the range of specifications, as this can cause damage or malfunction. (Refer to the specifications.)  
Please contact SMC if using for fluids other than compressed air. We do not guarantee against any damage if the product is used outside of the specification.
2. Take safety measures (e.g. mounting protective covers) when workpieces pose a danger of fingers being caught in a gripper, etc.
3. There is a danger of workpieces dropping if there is a decrease in gripping force due to a drop in circuit pressure caused by a power failure, etc. It is necessary to take measures such as drop prevention so that injury and damage to machinery or equipment can be prevented.

### 2-2. Selection

#### ⚠ Warning

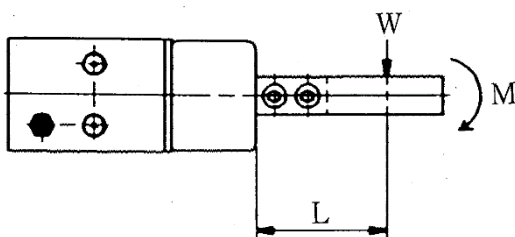
1. The gripping point should be set within the limited range.

When the gripping point distance becomes large, the gripper attachment applies an excessively large load to the gripper sliding section, and causes adverse affects on the life of the gripper. Refer to the catalog for details.



2. When using single acting type, use it within the allowable moment.

When a moment as shown in the figure below acts on a finger, the spring force may not allow the finger to return to its original position, so use within the moment shown in the table below.



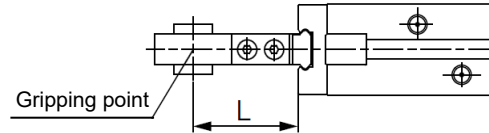
M ; Allowable moment  
( $M=WL$ )

Model	Allowable moment N·m
MHK2-12S,C MHKL2-12S,C	0.05
MHK2-16S,C MHKL2-16S,C	0.12
MHK2-20S,C MHKL2-20S,C	0.25
MHK2-25S,C MHKL2-25S,C	0.49

3. Attachments should be designed to be as light and short as possible.

(1) A long or heavy attachment increases the inertia force required to open or close the fingers. This may cause unsteady movement of fingers and have an adverse affect on the life of the gripper.

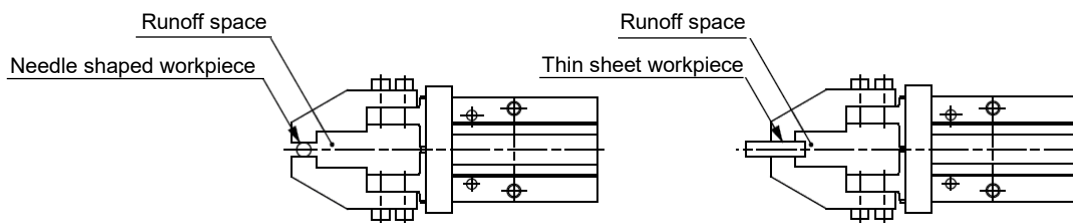
(2) Design the attachment as short and light as possible even if the gripping point is within the limited range. Refer to the catalog for details.



(3) Select a larger size gripper or used two or more grippers for handling a long and/or large workpiece.

4. Provide a run off space in the attachment when using with a small or thin workpiece.

If a run off space is not provided within the finger part, gripping becomes unsteady, and it may lead to gripping failure or slippage.



5. Select a model whose gripping force is compatible with the workpiece mass.

Incorrect selection may lead to the dropping of a workpiece, etc. Refer to the model selection criteria of each series for the effective gripping force and the workpiece mass.

6. Do not use the product in applications where excessive external force or impact force is applied. It may cause product failure. Please consult with SMC if necessary.

7. Select a model having a sufficient working finger opening/closing width.

< In case of insufficient width >

(1) Gripping becomes unsteady due to variations in opening/closing width or workpiece diameter.

(2) When using an auto switch, the detection may not be reliable. Refer to the Auto Switch Hysteresis section and set the stroke including the hysteresis length for a reliable switch function. When using the water resistant 2-color indicator auto switch, the gripper stroke may be limited by the setting of the indicator color during detection.

8. Please consult with SMC regarding a single acting, spring force only grip type.

In some cases, this can cause unstable gripping or return malfunction, due to faulty operation, etc.

9. Do not disassemble or modify (including additional work) the product in any manner other than that described in this manual.

Failure to do so may result in injury or accident.

10. When using with auto switch incorporated, please refer to Auto Switch/Common Precautions in the catalog.

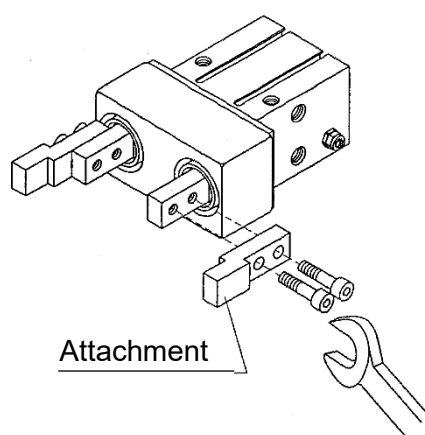
## 2-3. Installation

### Warning

1. Install and operate the product only after reading the Operation Manual carefully and understanding its contents. Also, keep the manual where it can be referred to as necessary.
2. Allow sufficient space for maintenance and inspection.
3. Tighten the screws to the recommended torque when installing.
4. Do not drop or hit the product when mounting to avoid scratches and dents.  
Even slight deformation can cause the deterioration of accuracy and operation failure.

### Mounting attachment to the finger

- 1) To mount the attachment to the finger, make sure to use a wrench to support the attachment so as not to apply undue strain on the finger
- 2) The attachment should be mounted with the torque specified in the following table by screwing the bolt into the female mounting thread of the finger.

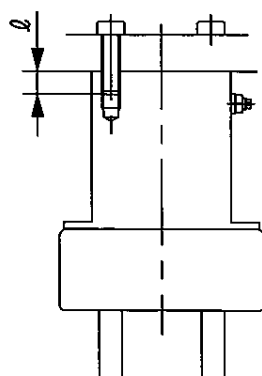


Model	Screw	Max. tightening torque (N·m)
MHK2-12□ MHKL2-12□	M3x0.5	0.59
MHK2-16□ MHKL2-16□		
MHK2-20□ MHKL2-20□	M4x0.7	1.4
MHK2-25□ MHKL2-25□	M5x0.8	2.8

5. Tighten the screw within the specified torque range when mounting the air gripper. Tightening with a torque above the limit can cause malfunction, while insufficient tightening can cause slippage and dropping.

### Mounting Gripper

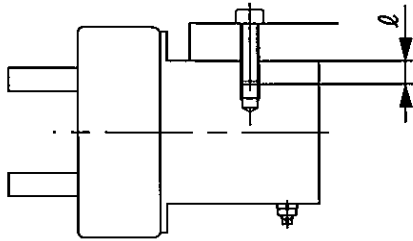
Axial mounting(Body tapped)



Model	Screw	Max. tightening torque (N·m)	Maximum screw-in depth (L mm)
MHK2-12□ MHKL2-12□	M3x0.5	0.88	6
MHK2-16□ MHKL2-16□			
MHK2-20□ MHKL2-20□	M4x0.7	2.1	8
MHK2-25□ MHKL2-25□	M5x0.8	4.3	10
MHK2-25□ MHKL2-25□	M6x1	7.3	12

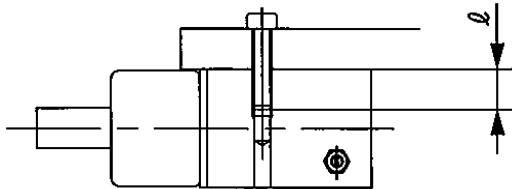


### Vertical mounting(Body tapped)



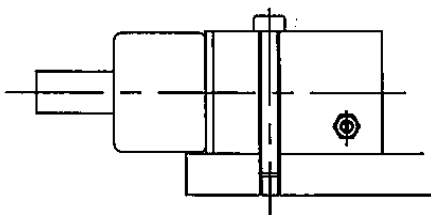
Model	Screw	Max. tightening torque (N·m)	Maximum screw-in depth (L mm)
MHK2-12□ MHKL2-12□	M3x0.5	0.59	4
		0.74	5
MHK2-16□ MHKL2-16□	M4x0.7	0.88	4
		1.3	5
MHK2-20□ MHKL2-20□	M5x0.8	3.3	8
MHK2-25□ MHKL2-25□	M6x1	5.9	10

### Side mounting (Body tapped)



Model	Screw	Max. tightening torque(N·m)	Maximum screw-in depth (L mm)
MHK2-12□ MHKL2-12□	M4x0.7	2.1	8
MHK2-16□ MHKL2-16□			
MHK2-20□ MHKL2-20□	M5x0.8	4.3	10
MHK2-25□ MHKL2-25□	M6x1	7.3	12

### Horizontal mounting (Body tapped)

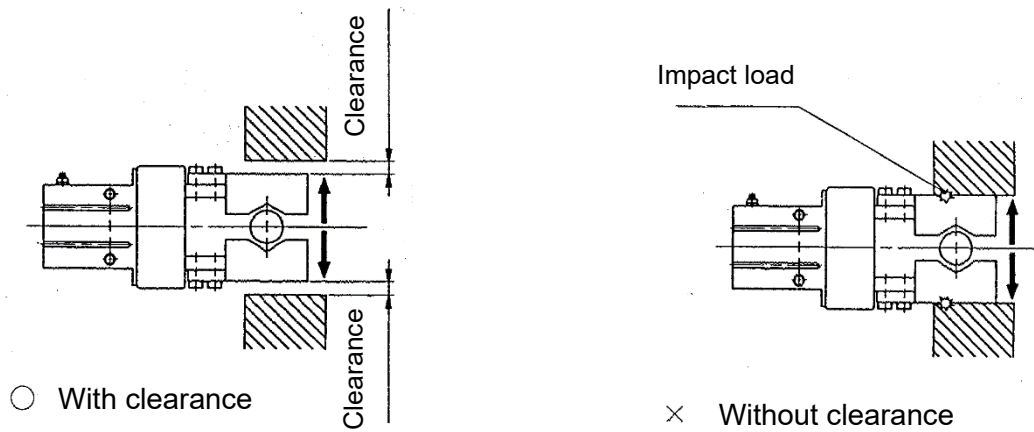


Model	Screw	Max. tightening torque (N·m)
MHK2-12□ MHKL2-12□	M3x0.5	0.88
MHK2-16□ MHKL2-16□		
MHK2-20□ MHKL2-20□	M4x0.7	2.1
MHK2-25□ MHKL2-25□	M5x0.8	4.3

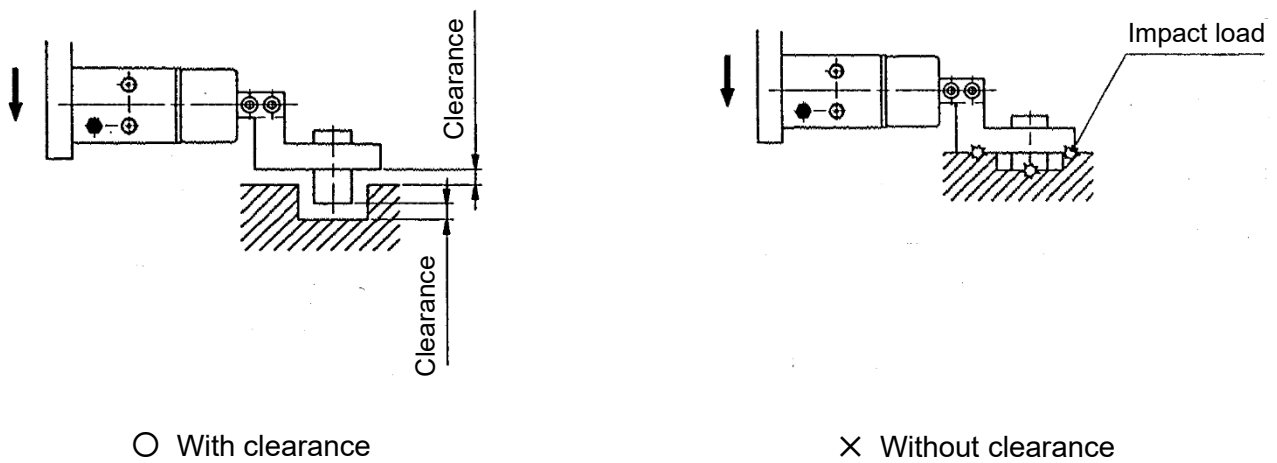
### ⚠ Caution

1. Avoid twisting the gripper when mounting an attachment.  
Any damage to the gripper may cause malfunction and reduce the accuracy.
2. Avoid external force to fingers.  
Fingers may be damaged by a continual lateral or impact load.  
Provide clearance to prevent the workpiece or the attachment from striking against any object at the stroke end.

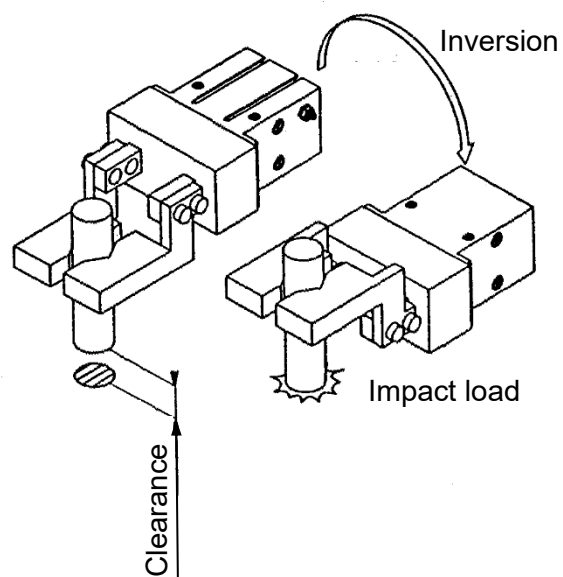
### 1. Stroke end when fingers are opened



### 2. Stroke end when gripper is moving

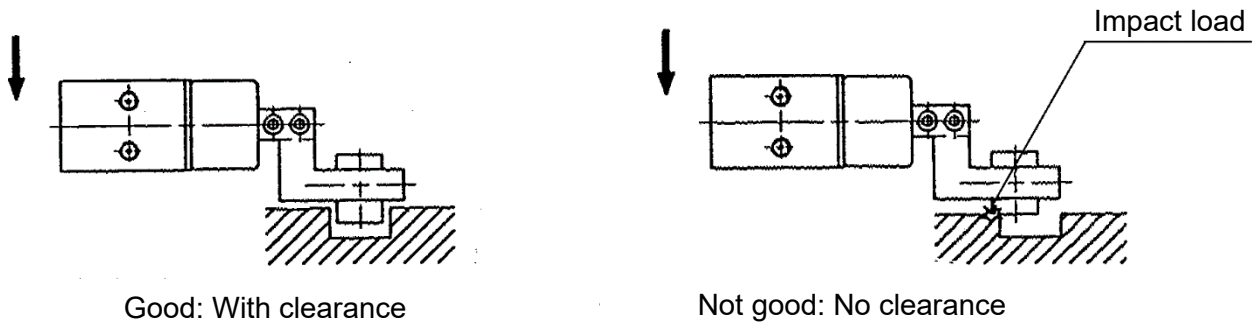


### 3. When turning over



3. Adjust the gripping point so that an excessive force will not be applied to the fingers when inserting a workpiece.

Confirm that the gripper can operate without receiving any shock by testing it in manual operation mode or by low speed operation.

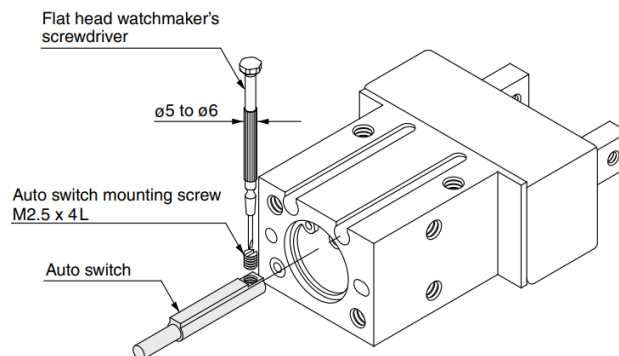


4. Control the opening/closing speed with the speed controller to avoid excessive high speed operation.

If the finger opening/closing speed is greater than necessary, impact forces on the fingers and other parts will increase. This can cause a loss of repeatability when gripping a workpiece and have an adverse effect on the life of the gripper unit. It may be difficult to adjust the speed using meter-out control depending on the piping condition. In this case, adjust the speed using meter-in control or with dual speed controllers.

5. Auto Switch Fixing Method

To fix the auto switch, insert it into the auto switch mounting groove of the air chuck from the direction shown in the figure below, set the mounting position, and tighten the supplied auto switch mounting screw using a flat-blade watch driver.

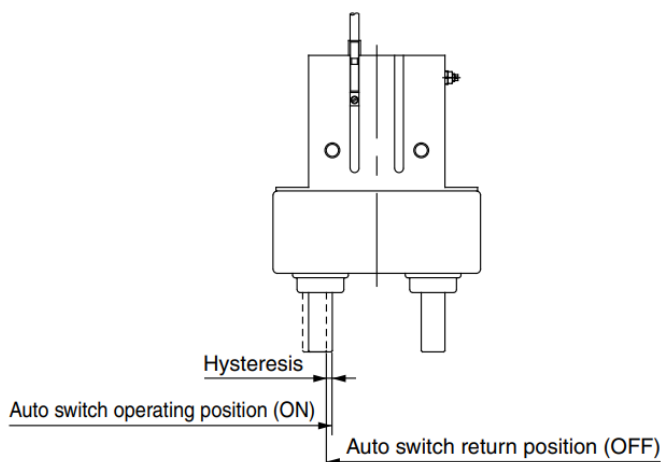


Note) When tightening the auto switch mounting screws, use a watch driver with a grip diameter of about 5 to 6 mm.

The tightening torque should be about 0.05 to 0.15 N-m.

## 6. Auto Switch Hysteresis

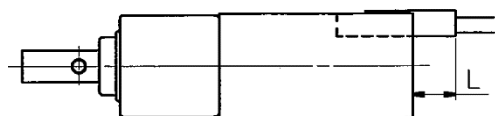
Auto switches have hysteresis similar to micro switches. Use the table below as a guide when adjusting auto switch positions, etc.



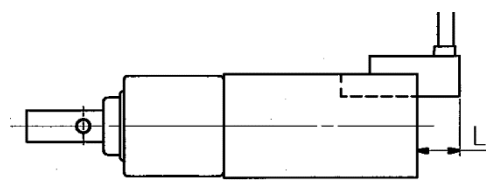
Auto switch	Max.hysteresis(mm)
	D-M9□(v) D-M9□A(v) M9□W(v)
Air gripper	
MHK□2-12	0.1
MHK□2-16	0.1
MHK□2-20	0.3
MHK□2-25	0.2

## 7. Protrusion of Auto Switch from Edge of Body

- The amount of auto switch protrusion from the body's end surface is as shown in the table below.
- Use the table as a guideline for mounting.



When using auto switch D-M9□



When using auto switch D-M9□V

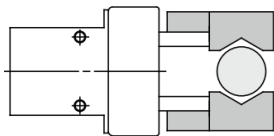
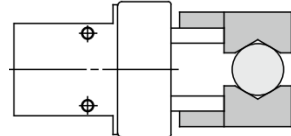
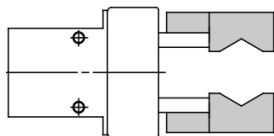
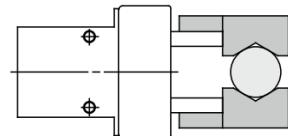
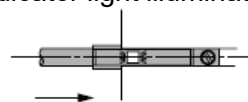
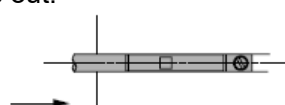
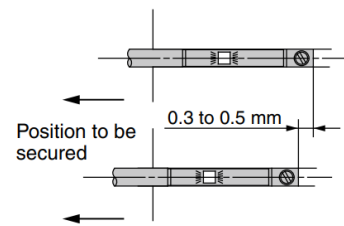
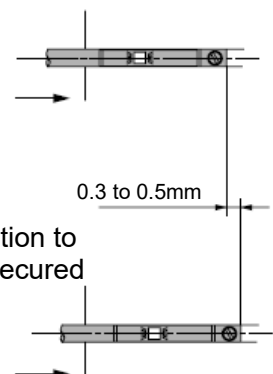
Maximum pop-out amount of auto switch

Note) There is no protrusion if no values are entered in the table.

Lead wire type		In-line electrical entry type		Perpendicular electrical entry type	
		D-M9□ D-M9□W	D-M9□A	D-M9□V D-M9□WV	D-M9□AV
Air gripper	Finger position				
	Auto switch Model				
MHK2-12□	Open	—	—	—	—
	Closed	3	5	—	3
MHK2-16□	Open	—	—	—	—
	Closed	3	5	1	3
MHK2-20□	Open	—	—	—	—
	Closed	1	3	—	1
MHK2-25□	Open	—	—	—	—
	Closed	2	4	—	2
MHKL2-12□	Open	—	—	—	—
	Closed	3	5	—	3
MHKL2-16□	Open	—	—	—	—
	Closed	3	5	1	3
MHKL2-20□	Open	—	—	—	—
	Closed	1	3	—	1
MHKL2-25□	Open	—	—	—	—
	Closed	1	3	—	1

## 8. Auto Switch Installation Examples and Mounting Positions

Detection when Gripping Exterior of Workpiece

Detection example				1)Confirmation of fingers in reset position	2)Confirmation of workpiece released
Position to be detected				Position of fingers fully opened 	Position of fingers fully closed 
Operation of auto switch				Auto switch turned ON when fingers return. (Light ON)	When a workpiece is not held (Abnormal operation): Auto switch to turn ON (Light ON)
Detection combinations	One auto switch * One position, any of 1)and 2) can be detected.			●	●
	Two auto switches * Two positions of 1)and 2) can be detected	Pattern	A	●	●
			B	—	●
			C	●	—
How to determine auto switch installation position At no pressure or low pressure, connect the auto switch to a power supply, and follow the derections.				Step 1) Fully open the fingers. 	Step 1) Fully close the fingers. 
				Step 2) Slide the auto switch in the direction of the arrow until the indicator light illuminates.   Step 3) Slide the auto switch further in the direction of the arrow until the indicator light goes out.   Step 4) Move the auto switch in the opposite direction and fasten it at a position 0.3 to 0.5 mm beyond the position where the indicator light illuminates. Position where light turns ON 	Step 2) Slide the auto switch in the direction of the arrow until the light illuminates and fasten it at a position 0.3 to 0.5 mm in the direction of the arrow beyond the position where the indicator light illuminates.  Position where light turns ON 

## 2-4. Piping

### Caution

1. Refer to the Fittings and Tubing Precautions (Best Pneumatics) for handling one touch fittings.
2. Before piping  
Before piping is connected, flush thoroughly with air or wash to remove chips, cutting oil and other debris from inside the pipe.

## 2-5. Lubrication

### Caution

1. The non-lube type air gripper is lubricated at the factory, and can be used without any further lubrication.  
If a lubricant is used in the system, use turbine oil Class 1 (with no additive) ISO VG32.  
Furthermore, once lubrication is applied, it must be continued.  
If lubrication is later stopped, malfunction can occur due to loss of the original lubricant.  
Refer to the Material Safety Data Sheet (MSDS) of the hydraulic fluid when supplying the fluid.

## 2-6. Air supply

### Warning

1. Please consult with SMC when using the product in applications other than compressed air.
2. Compressed air containing a large amount of condensate can cause malfunction of pneumatic equipment. An air dryer or water droplet separator should be installed upstream from filters.
3. If condensate in the drain bowl is not emptied on a regular basis, the condensate will overflow and allow it to enter the compressed air lines. This will cause a malfunction of pneumatic equipment. If the drain bowl is difficult to check and remove, installation of a drain bowl with an auto drain option is recommended.
4. Use clean air.  
Do not use compressed air that contains chemicals, synthetic oils including organic solvents, salt or corrosive gases, etc., as it can cause damage or malfunction.  
For detailed information regarding the quality of the compressed air described above, refer to SMC's "Air Cleaning Systems".

### Caution

1. When extremely dry air is used as the fluid, degradation of the lubrication properties inside the equipment may occur, resulting in reduced reliability (or reduced service life) of the equipment. Please consult with SMC.
2. Install an air filter.  
Install an air filter upstream near the valve. A filtration degree of 5µm or less should be selected.
3. Install an aftercooler, air dryer or drain catch before the filter and take appropriate measures.  
Compressed air that contains excessive foreign material may cause malfunction of valves and other pneumatic equipment.  
Install an aftercooler, air dryer or drain catch before the filter and take appropriate measures.
4. Use the product within the specified fluid and ambient temperature range.  
When operating at temperatures 5°C or lower, water in the circuit may freeze and cause breakage of seals or malfunction. Measures should be taken to prevent freezing.  
For detailed information regarding the quality of the compressed air described above, refer to SMC's "Air Cleaning Systems".

## 2-7. Operating environment

### Warning

1. Do not use in an environment where corrosive gases, chemicals, sea water, water or steam are present.  
Refer to the construction drawings regarding the air chuck materials.
2. Do not use in direct sunlight.
3. Do not operate in a location subject to vibration or impact.

4. Do not mount the product in locations where it is exposed to radiant heat.
5. Do not use this product in an area that is dusty, or in an environment in which water or oil splashes on the cylinder.

### 3. Maintenance

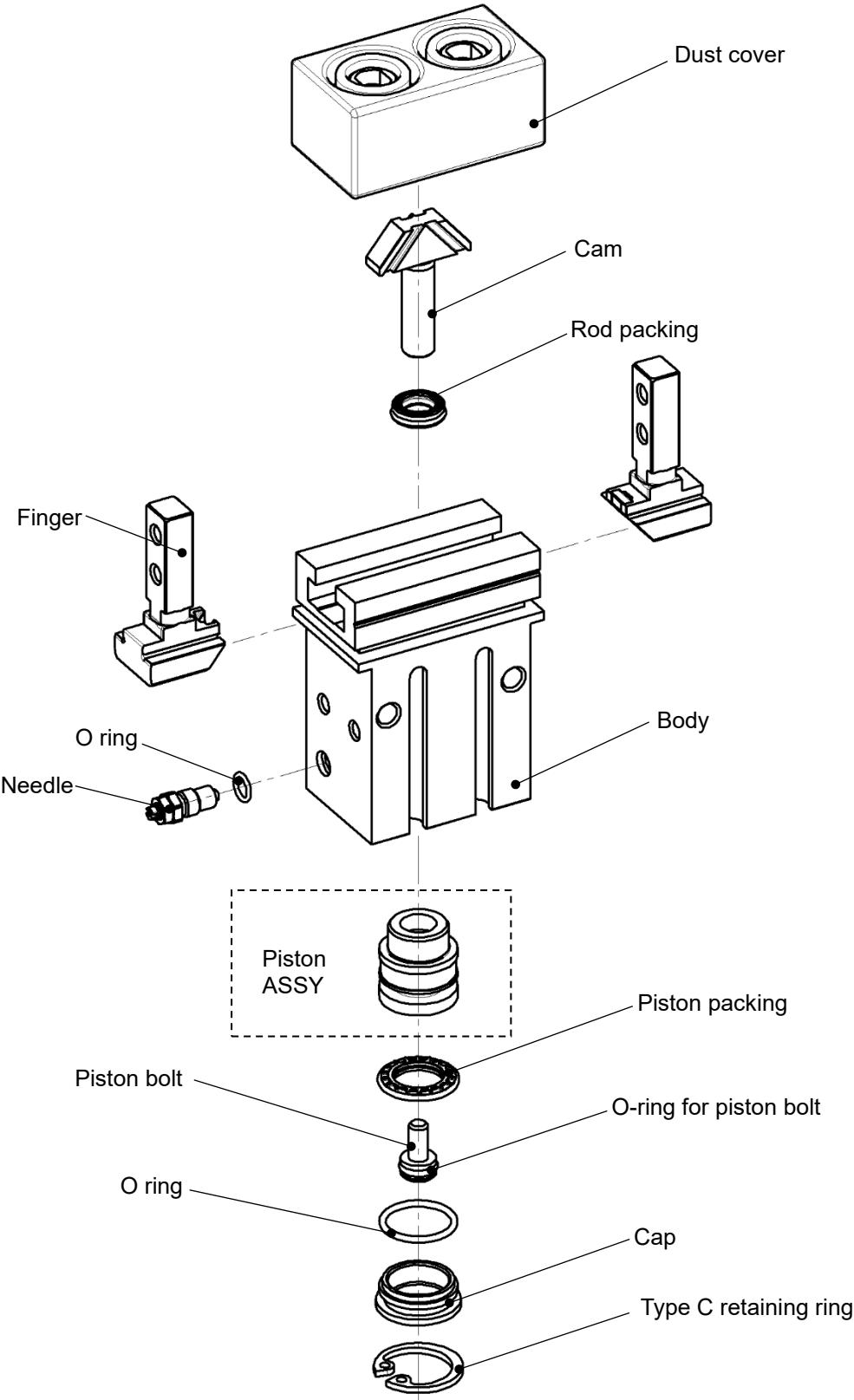
---

#### 3-1. Precautions

##### Warning

1. Maintenance should be performed according to the procedure indicated in the Operation Manual.  
If handled improperly, malfunction and damage of machinery of equipment may occur.
2. If handled improperly, compressed air can be dangerous. Assembly, handling, repair and element replacement of pneumatic systems should be performed by a knowledgeable and experienced person.
3. Remove drainage moisture from air filters regularly.
4. When components are removed, first confirm that measures are in place to prevent any workpieces from dropping, run-away of equipment, etc. Then cut off the supply pressure and electric power, and exhaust all compressed air from the system using the residual pressure release function.  
Turn off the power supply, stop the air supply and exhaust all compressed air from the system.
5. Do not allow people to enter or place objects in the carrying path of the air gripper.  
This can cause an injury or accident.
6. Do not put hands, etc. in between the air gripper fingers or attachments.  
This can cause an injury or accident.
7. When removing the air gripper, first confirm that no workpieces are being held and then release the compressed air before removing the air gripper.  
If a workpiece is still being held, there is a danger of it being dropped.

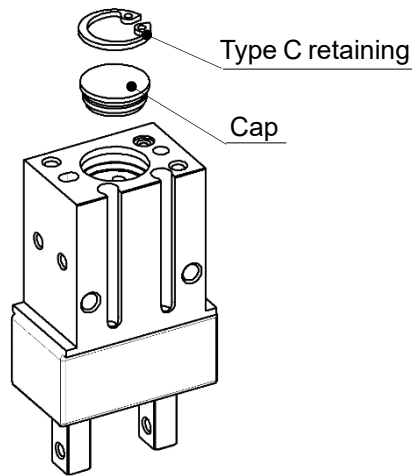
3-2. exploded view



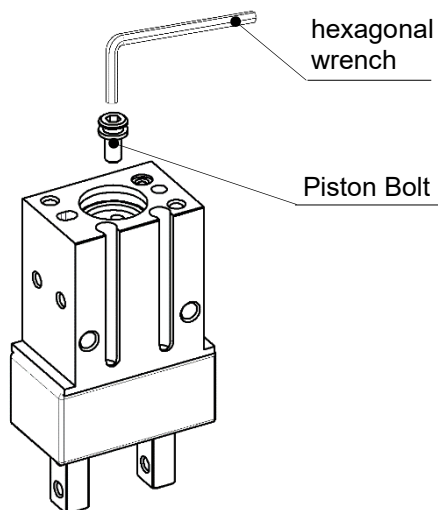


### 3-3. Replacement Procedure

1). Remove the C-shaped retaining ring with the prescribed tool and remove the cap.

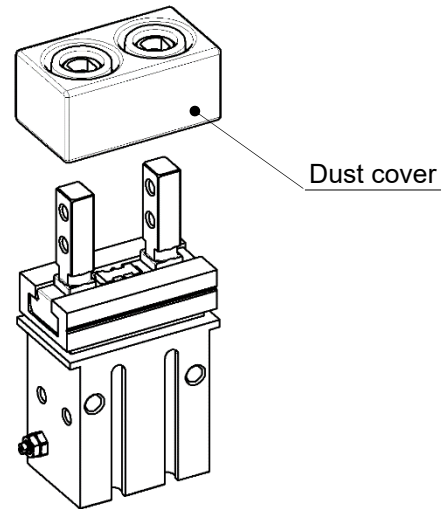


2). Remove the piston bolt.

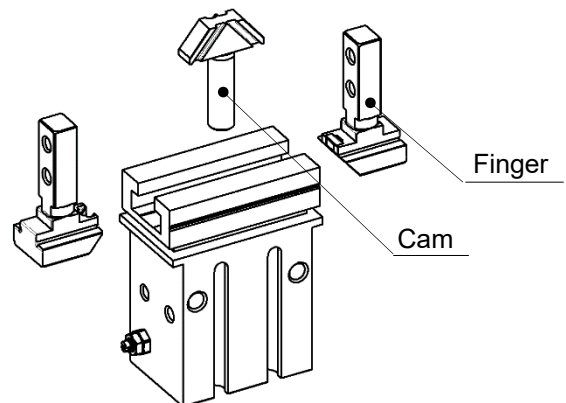


	Applicable bolts	width across flats	Max. tightening torque N · m
φ12	M3x0.5	2.5	0.63
φ16	M3x0.5	2.5	0.63
φ20	M3x0.5	2.5	0.63
φ25	M5x0.8	4	3.0

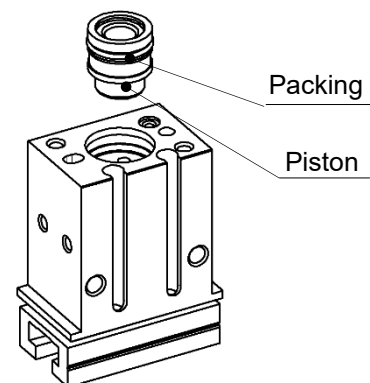
3). Remove the dust cover.



4). Open the fingers and remove the cam.

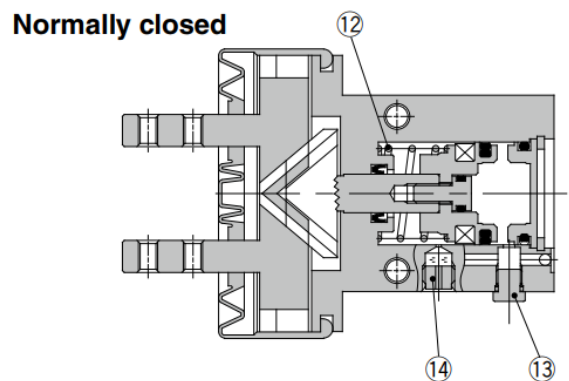
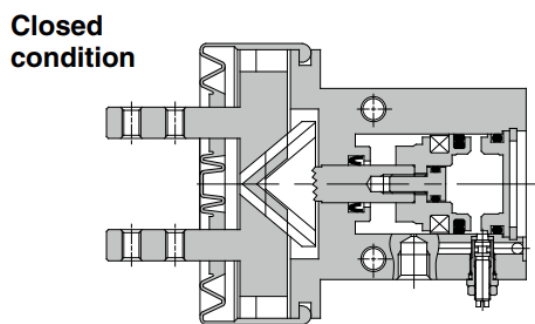
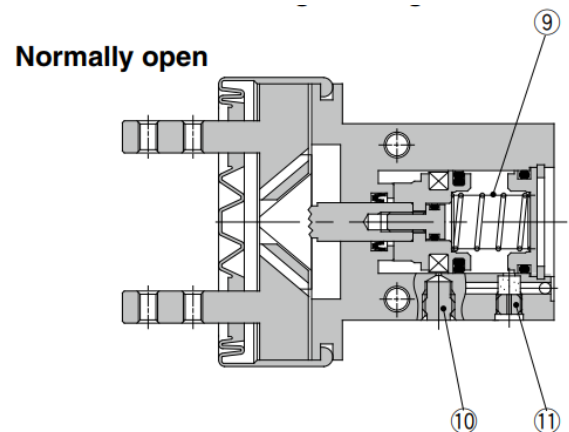
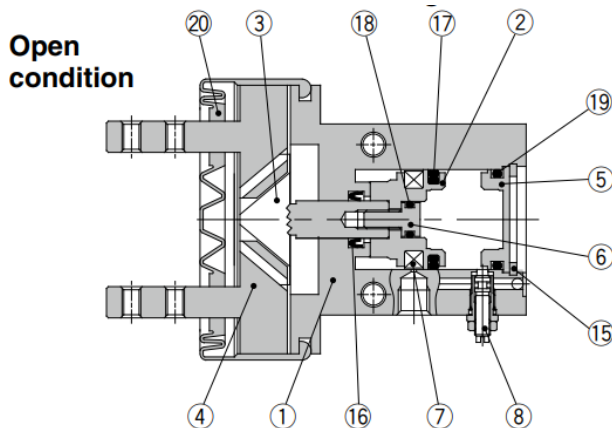


5). Remove the piston and replace the packing.



- When assembling, follow the reverse procedure.
- Use dedicated grease. Grease pack part number: MH-G01 (30g)

### 3-4. Component Parts/Replacement Parts



#### Components

No.	Description	Material	Note
1	Body	Aluminum alloy	Hard anodized
2	Piston	Aluminum alloy	Hard anodized
3	Cam	Carbon steel	Heat treated, Specially treated
4	Finger	Carbon steel	Heat treated, Specially treated
		Stainless steelSUS304	Option
5	Cap	Aluminum alloy	Hard anodized
6	Piston bolt	Stainless steel	
7	Lever magnet	Synthetic rubber	
8	Needle ASSY		
9	N.O. spring	Piano wire	
10	Plug	Brass	Electroless nickel plated
11	Exhaust plug	Brass	Electroless nickel plated
12	N.C. spring	Piano wire	
13	Plug ASSY	Brass	Electroless nickel plated
14	Exhaust plug A	Brass	Electroless nickel plated
15	Type C retaining ring	Carbon steel	Nickel plated

No.	Description	Material	Note
16	Lod packing	NBR	
17	Piston packing	NBR	
18	Gasket	NBR	
19	Gasket	NBR	
20	Dust cover	CR	
		FKM	
		Silicone rubber	

### MHK2 replacement parts

MHK2 Replacement parts

Description			MHK2-12□	MHK2-16□	MHK2-20□	MHK2-25□	Main parts
Packing set			MHK12-PS	MHK16-PS	MHK20-PS	MHK25-PS	⑬⑭⑮⑯
Piston ASSY			MHK-A1201	MHK-A1601	MHK-A2001	MHK-A2501	②⑥⑦
Cam			P3318103	P3318203	P3318303	P3318403	③
Finger	Material	Carbon steel	P3318104	P3318204	P3318304	P3318404	④
		Stainless steel SUS304	P3318104-1	P3318204-1	P3318304-1	P3318404-1	
Needle ASSY			MHK-A1206				⑧
Dust cover	Material	CR	MHK2-J12	MHK2-J16	MHK2-J20	MHK2-J25	⑳
		FKM	MHK2-J12F	MHK2-J16F	MHK2-J20F	MHK2-J25F	
		Silicone rubber	MHK2-J12S	MHK2-J16S	MHK2-J20S	MHK2-J25S	

### MHKL2 replacement parts

MHKL2 Replacement parts

Description			MHKL2-12□	MHKL2-16□	MHKL2-20□	MHKL2-25□	Main parts
Packing set			MHK12-PS	MHK16-PS	MHK20-PS	MHK25-PS	⑬⑭⑮⑯
Piston ASSY			MHK-A1201	MHK-A1601	MHK-A2001	MHK-A2501	②⑥⑦
Cam			P3318111	P3318211	P3318311	P3318411	③
Finger	Material	Carbon steel	P3318112	P3318212	P3318312	P3318412	④
		Stainless steel SUS304	P3318112-1	P3318212-1	P3318312-1	P3318412-1	
Needle ASSY			MHK-A1206				⑧
Dust cover	Material	CR	MHKL2-J12	MHKL2-J16	MHKL2-J20	MHKL2-J25	⑳
		FKM	MHKL2-J12F	MHKL2-J16F	MHKL2-J20F	MHKL2-J25F	
		Silicone rubber	MHKL2-J12S	MHKL2-J16S	MHKL2-J20S	MHKL2-J25S	

\*Order 2 pieces per one finger unit.

Replacement part/Grease pack part no.: MH-G01 (30 g)

Revision history
1. Layout change

## SMC Corporation

4-14-1, Sotokanda, Chiyoda-ku, Tokyo 101-0021 JAPAN

Tel: + 81 3 5207 8249 Fax: +81 3 5298 5362

URL <https://www.smcworld.com>

---

Note: Specifications are subject to change without prior notice and any obligation on the part of the manufacturer.

© 2023 SMC Corporation All Rights Reserved