

## Auto Hand Changer MJB Series

**Compact & Lightest weight !**  
**Supports productivity by multi-functionalization and speed up of robots !**



Auto Hand Changer  
MJB Series

Compliance Light for  
Auto Hand Changer

Exclusive adapter

Electric Hand  
Flat Type



- **Worlds most lightest**  
(Max. load capacity comparison)  
Supports robot speed up !
- **Size variation**  
3 sizes of load capacity 3kg, 10kg, 20kg
- **Pneumatic interface installed**  
4 to 10 ports, depending on size
- **Electric interface installed**  
Solder terminal, D-sub, Small connector

Conclude various operation by this unit!

Easy to assemble necessary functions such as tool changers, alignment and grippers. Supports large reduction of man-hours for designing!



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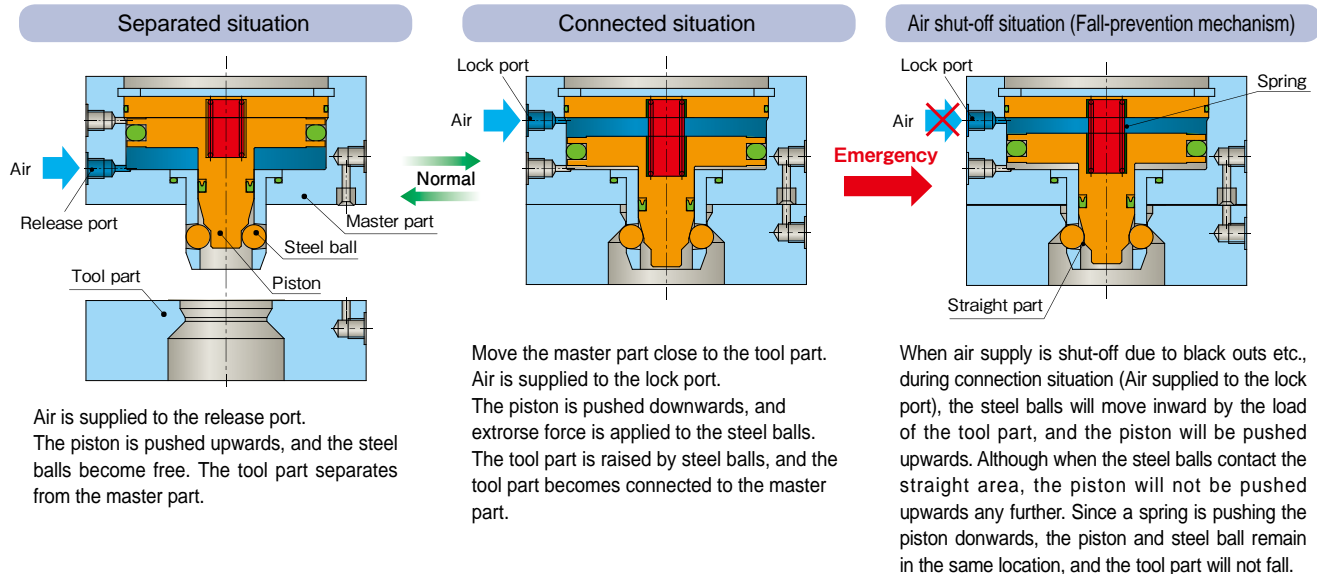
Auto Hand Changer  
MJB Series

Electric Hand Flat Type



(Unit example)

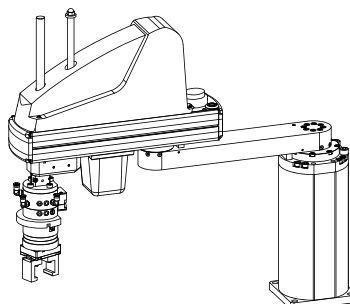
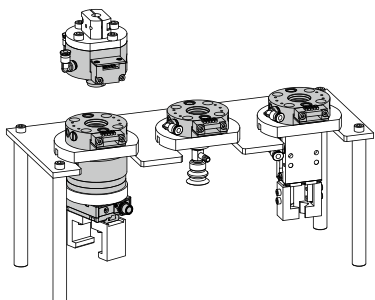
## Operation explanation



## Application example of Auto Hand Changer

### Unit of Compliance Light and Flat Type Electric hand

- Through hole for mounting (For direct mounting), thread location • diameter is adjusted, and easy to install!



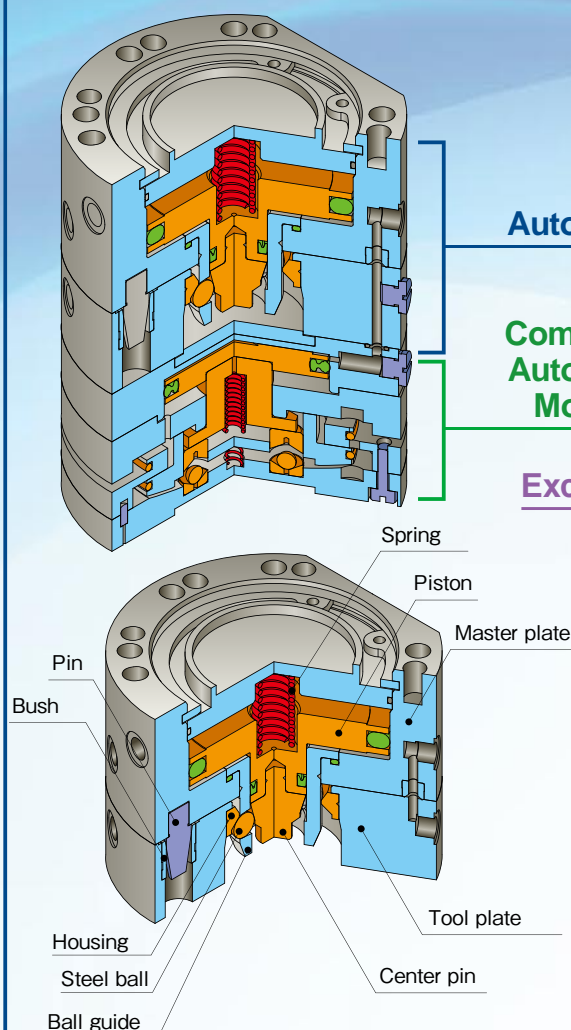
# Koganei handling unit product

## Conclude various operation with this unit!

Exclusive adapter <sup>(Note 2)</sup> is prepared to easily combine [Compliance Light for Auto Hand Changer] and [Flat Type Electric Hand] [Air Hand <sup>(Note 1)</sup>]. Reduce designing man-hours and product weight by using exclusive adapters!

(Note 1) Flat Type Air Hands AFDPG Series, Linear Guide NHBDPG Series.

(Note 2) Please refer to page 30 for size combination.



Auto Hand Changer  
MJB Series

Compliance light for  
Auto Hand Changer  
Model: CPLHB□

Exclusive adapter

Flat Type  
Electric Hand



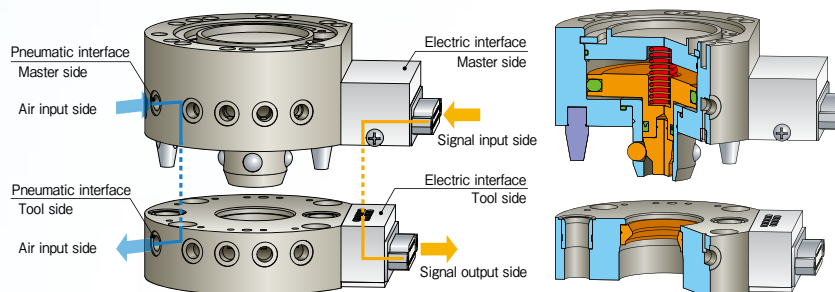
Tool changers have an interface function to connect air <sup>(Note 1)</sup> and electric signals <sup>(Note 2)</sup> which are necessary for the tool side, when exchanging the end of robots handling units.

When combining with Compliance Light for Auto Hand Changer, there is an option to supply the air which is used for locking the correction function of the Compliance Light, through an exclusive internal channel, to the Auto Hand Changer.

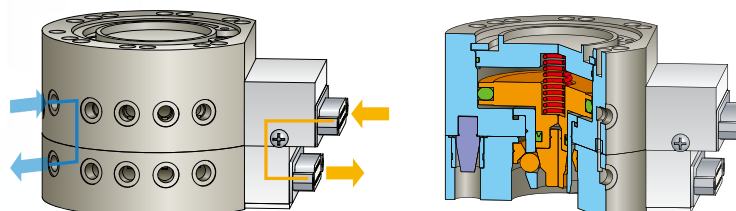
(Note 1) The number of ports differ depending on the size and specification. Please refer to page 11 for details.

(Note 2) The types of interfaces are different depending on the size. Please select from options.

### Separated situation



### Connected situation

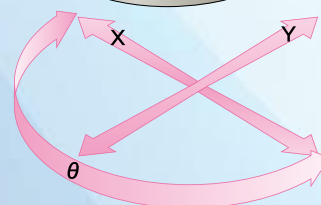
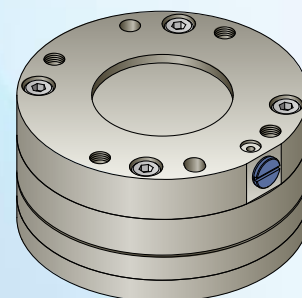
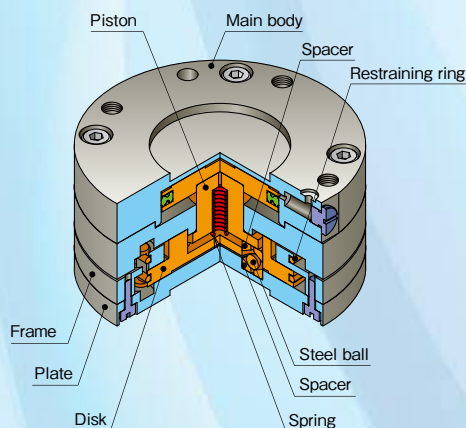


# Compliance Light for Auto Hand Changer

Suitable for fast transfer robot operation, by improved retainment.

## Parallel type

CPLHB□F

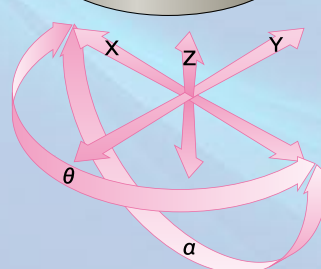
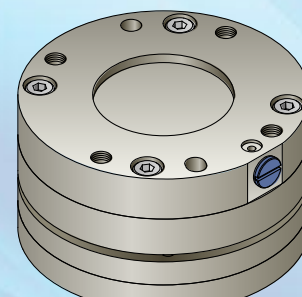
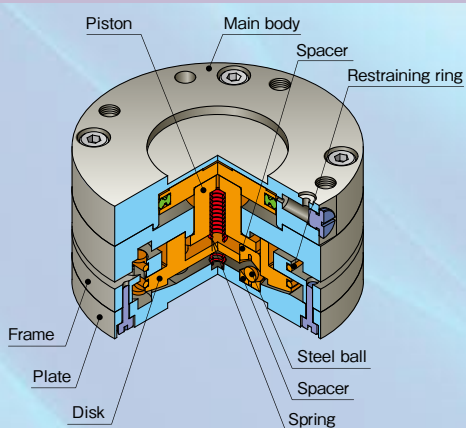


P=0.5MPa	CPLHB34F	CPLHB54F	CPLHB70F
●Withstand load when air supplied	24N	64N	115N
●Maximum load capacity	1kg	2kg	4kg
●Size variation	φ 34mm	φ 54mm	φ 70mm

\* Withstand load is measured by Koganei test standards (Reference)

## Swing type

CPLHB□S



P=0.5MPa	CPLHB34S	CPLHB54S	CPLHB70S
●Withstand load when air supplied	24N	64N	115N
●Maximum load capacity	1kg	2kg	4kg
●Size variation	φ 34mm	φ 54mm	φ 70mm

\* Withstand load is measured by Koganei test standards (Reference)



# Additional parts

## Robot adapter (For Auto Hand Changer)

Adapters for installing the the Auto Hand Changer (MJB□) to robots are available. The adapters follow ISO (JIS) standards, and easy to install.  
\*Please see page 30 for reference.



Robot adapter



Example

Auto Hand Changer  
+  
Robot adapter

## Adapter for Flat Type Electric Hand (For Compliance Light)

Adapter for mounting Flat Type Electric Hand to Compliance Light for Auto Hand Changer (CPLHB□) is available.



Adapter for Flat Type Electric Hand  
(Only for Flat Type)



Example

Flat Type Electric Hand  
+  
Adapter for Flat Type Electric Hand

## Adapter for Air Hand (For Auto Hand Changer・Compliance Light)

Adapters for installing Koganei Air Hands to Auto Hand Changer (MJB□) and Compliance Light (CPLHB□) is available. Compatible to Flat Type Air Hand AFDPG Series and Linear Guide Air Hands NHBDPG Series.

\*Please refer to page 27, 28, 29 for details.



Adapter for Air Hand

Example

Auto Hand Changer  
+  
Compliance Light  
+  
Adapter for Air Hand







Before selecting and using the product, please read all the Safety Precautions carefully to ensure proper product use.

The Safety Precautions shown below are to help you use the product safely and correctly, and to prevent injury or damage to you, other people, and assets beforehand.

Follow the Safety Precautions for: ISO4414 (Pneumatic fluid power—Recommendations for the application of equipment to transmission and control systems), JIS B 8370 (Pneumatic system regulations)

The directions are ranked according to degree of potential danger or damage: “DANGER!”, “WARNING!”, “CAUTION!”, and “ATTENTION!”

 <b>DANGER</b>	Expresses situations that can be clearly predicted as dangerous. If the noted danger is not avoided, it could result in death or serious injury. It could also result in damage or destruction of assets.
 <b>WARNING</b>	Expresses situations that, while not immediately dangerous, could become dangerous. If the noted danger is not avoided, it could result in death or serious injury. It could also result in damage or destruction of assets.
 <b>CAUTION</b>	Expresses situations that, while not immediately dangerous, could become dangerous. If the noted danger is not avoided, it could result in light or semi-serious injury. It could also result in damage or destruction of assets.
 <b>ATTENTION</b>	While there is little chance of injury, this content refers to points that should be observed for appropriate use of the product.

## ■ This product was designed and manufactured as parts for use in General Industrial Machinery.

■ In the selection and handling of the equipment, the system designer or other person with fully adequate knowledge and experience should always read the Safety Precautions, Catalog, Owner’s Manual and other literature before commencing operation. Making mistakes in handling is dangerous.

■ After reading the Owner’s Manual, Catalog, etc., always place them where they can be easily available for reference to users of this product.

■ If transferring or lending the product to another person, always attach the Owner’s Manual, Catalog, etc., to the product where they are easily visible, to ensure that the new user can use the product safely and properly.

■ The danger, warning, and caution items listed under these “Safety Precautions” do not cover all possible cases. Read the Catalog and Owner’s Manual carefully, and always keep safety first.

## **DANGER**

- Do not use the product for the purposes listed below:
  - Medical equipment related to maintenance or management of human lives or bodies.
  - Mechanical devices or equipment designed for the purpose of moving or transporting people.
  - Critical safety components in mechanical devices.
 This product has not been planned or designed for purposes that require advanced stages of safety. It could cause injury to human life.
- Do not use the product in locations with or near dangerous substances such as flammable or ignitable substances. This product is not explosion-proof. It could ignite or burst into flames.
- When mounting the product and workpiece, always firmly support and secure them in place. Dropping or falling the product or improper operation could result in injury.
- Never attempt to remodel the product. It could result in abnormal operation leading to injury.
- Never attempt inappropriate disassembly, or assembly of the product relating to its basic inner construction, or to its performance or functions. It could result in injury.
- Do not splash water on the product. Spraying it with water, washing it, or using it underwater could result in malfunction of the product leading to injury.
- While the product is in operation, avoid touching it with your hands or otherwise approaching too close. In addition, do not make any adjustments to the interior or to the attached mechanisms (disconnection of piping tubes).  
The actuator can move suddenly, possibly resulting in injury.

## **WARNING**

- Do not use the product in excess of its specification range. Such use could result in product breakdowns, functions to stop, and damage. or drastically reduce the operating life.
- Before supplying air to the product and before starting operation, always conduct a safety check of the area of machine operation. Unintentional supply of air or electricity could possibly result in injury caused by contact with moving parts.
- Always check the catalog and other reference materials for correct product piping. Improper piping creates the risk of damage to and abnormal operation of the actuator.

- Do not throw the product into fire.  
The product could explode and/or release toxic gases.
- Do not sit on the product, place your foot on it, or place other objects on it.  
Accidents such as falling could result in injury. Dropping or toppling the product may result in injury, or it might also damage or break it, resulting in abnormal or erratic operation, runaway, etc.
- When conducting any kind of operation for the product, such as maintenance, inspection, repair, or replacement, always turn off the air supply completely and confirm that residual pressure inside the product or in piping connected to the product is zero before proceeding.  
In particular, be aware that residual air will still be in the air compressor or air storage tank. The actuator could abruptly move if residual air pressure remains inside the piping, causing injury.
- Do not use the actuator for equipment whose purpose is absorbing the shocks and vibrations of mechanical devices. It could break and possibly result in injury or in damage to mechanical devices.
- Use within the maximum load capacity. Using the product beyond the maximum load capacity may damage equipment or cause personal injury.
- Use safety circuits or system designs to prevent damage to machinery or injury to personnel when the machine is shut down due to emergency stop or electrical power failure.
- In initial operations after the equipment has been idle for 48 hours or more, or has been in storage, there is a possibility that contacting parts may stick, resulting in equipment operation delays or sudden movements. For these initial operations, always run a test operation before use to check that operating performance is normal.
- Do not use the product near the ocean, in direct sunlight, near mercury vapor lamps, or near equipment that generates ozone. Deterioration of rubber parts caused by ozone may reduce performance and functions or stop functions.
- Because Koganei products may be used under a wide variety of conditions, decisions concerning conformance with a particular system should be made upon the careful evaluation by the person in charge of system design. Assurances concerning expected system performance and safety are the responsibility of the designer who decides system conformity. Be sure to use the latest catalogs and technical materials to study and evaluate specification details, to consider the possibility of machine breakdown, and to configure a system that ensures fail-safe safety and reliability.

## Safety Precautions (Air Cylinders and General Actuators)

- Do not use the product in locations subject to direct sunlight (ultraviolet radiation), in locations with dust, salt, or iron particles, or in locations with media and/or ambient atmosphere that include organic solvents, phosphate ester type hydraulic oil, sulfur dioxide gas, chlorine gas, acids, etc. Such uses could lead to loss of functions within a short period, sudden degradation in performance, or reduced operating life. For details on materials used in the product, refer to the description of materials used in major parts.



### CAUTION

- When installing the product, leave room for adequate working space around it. Failure to ensure adequate working space will make it more difficult to conduct daily inspections or maintenance, which could eventually lead to system shutdown or damage to the product.
- Do not scratch, dent, or deform the actuator by climbing on the product, using it as a scaffold, or placing objects on top of it. It could result in damaged or broken a product that results in operation shutdown or degraded performance.
- Always post an "operations in progress" sign for installations, adjustments, or other operations, to avoid unintentional supplying of air, electrical power, etc. Such accidental supplies may cause electric shock or sudden activation of the product that could result in physical injury.
- Using extremely dry air with a dew point lower than -20°C [-4°C], may affect the quality of the lubricating oil used. This creates the risk of degraded performance, loss of function, or other problems.



### ATTENTION

- When considering the possibility of using this product in situations or environments not specifically noted in the Catalog or Owner's Manual, or in applications where safety is an important requirement such as in an airplane facility, combustion equipment, leisure equipment, safety equipment, and other places where human life or assets may be greatly affected, take adequate safety precautions such as an application with enough margins for ratings and performance or failsafe measure.  
Be sure to consult us about such applications.
- Use a protective cover, etc., to ensure that human bodies do not come into direct contact with the operating portion of mechanical devices, etc.
- Do not control in a way that would cause workpieces to fall during power failure.  
Take control measures so that they prevent the workpieces, etc., from falling during power failure or emergency stop of the mechanical devices.
- When handling the product, wear protective gloves, safety glasses, safety shoes, etc., to keep safety.
- When the product can no longer be used, or is no longer necessary, dispose of it appropriately as industrial waste.
- Pneumatic equipment can exhibit degraded performance and function over its operating life. Always conduct daily inspections of the pneumatic equipment, and confirm that all requisite system functions are satisfied, to prevent accidents from happening.
- For inquiries about the product, contact your nearest Koganei sales office or Koganei overseas department. The address and telephone number is shown on the back cover of this catalog.



### OTHERS

- Always observe the following items.
  1. When using this product in pneumatic systems, always use genuine KOGANEI parts or compatible parts (recommended parts).  
When conducting maintenance and repairs, always use genuine KOGANEI parts or compatible parts (recommended parts).  
Always observe the required methods.
  2. Do not attempt inappropriate disassembly or assembly of the product relating to basic configurations, or its performance or functions.

Koganei cannot be responsible if these items are not properly observed.

### Warranty and General Disclaimer

#### 1. Warranty Period

The warranty period for Koganei products is 1 year from the date of delivery.

\*However, some products have a 2-year warranty; contact your nearest Koganei sales office or the Koganei overseas department for details.

#### 2. Scope of Warranty and General Disclaimer

- (1) When a product purchased from Koganei or from an authorized Koganei distributor or agent malfunctions during the warranty period in a way that is attributable to Koganei's responsibility, Koganei will repair or replace the product free of charge. Even if a product is still within the warranty period, its durability is determined by its operation cycles and other factors. Contact your nearest Koganei sales office or the Koganei overseas department for details.
- (2) The Koganei product warranty covers individual products. Therefore, Koganei is not responsible for incidental losses (repair of this product, various expenses required for replacement, etc.) caused by breakdown, loss of function, or loss of performance of Koganei products.
- (3) Koganei is not responsible for any losses or for any damages to other machinery caused by breakdown, loss of function, or loss of performance of Koganei products.
- (4) Koganei is not responsible for any losses due to use or storage of the product in a way that is outside of the product specifications prescribed in Koganei catalogs and instruction manuals, and/or due to actions that violate the mounting, installation, adjustment, maintenance or other safety precautions.
- (5) Koganei is not responsible for any losses caused by breakdown of the product due to factors outside the responsibility of Koganei, including but not limited to fire, natural disaster, the actions of third parties, and intentional actions or errors by the purchaser.



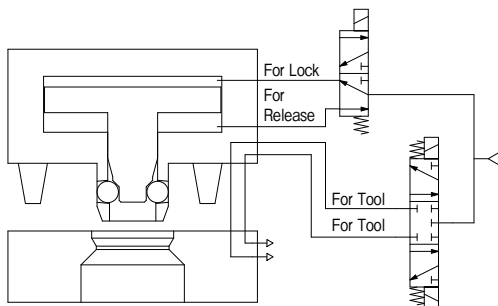
## General Precautions

### Piping

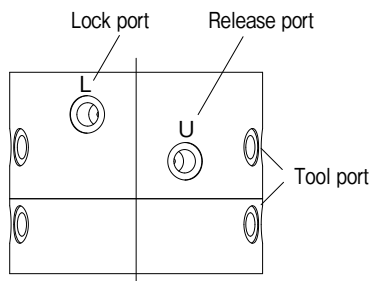
1. Before performing piping work on the product, thoroughly flush the inside of the pipes (blow out with compressed air). Machining chips, sealing tape, rust and other debris remaining from the piping work may result in air leaks and malfunctions.
2. Although the product installs a fall prevention mechanism, make sure to connect piping so that air will be supplied even when solenoid valves used for connecting and separation operations are OFF.
3. To block air during separating operation, use a 3 port valve or a 3 position (all port block) valve for the tool port.

### Application Example

#### < Recommended Circuit >



#### < Piping >



\*Note: Letter [L] (lock) for the lock port, and letter [U] (unlock) for the unlock port are marked on the body. There are no marks on the ports for the tool, and both the master and tool will be connected in position which both ports of each body match together.

### Air Supply

1. Use air as the medium. For the use of any other medium, consult your nearest Koganei sales office.
2. Air used for the product should be clean air that contains no degraded compressor oil, etc. Install an air filter (filtration of 40  $\mu$ m or less) near the product to remove collected liquid or dust. Also drain the air filter periodically. If liquid or dust gets into the product, it may cause defective operation.

### Lubrication

Never apply lubrication to the product. Doing so may cause defective operation.

### Environment

1. Cover the unit when using it in locations where it might be subject to excessive dust, dripping water, dripping oil, etc.
2. Do not use the product in environments which may be corrosive. Using the cylinder in these types of environments may result in damage or defective operation.
3. Do not use it in excessively dry conditions.
4. Do not use the cylinder if the ambient temperature is over 60°C [140°F], doing so may result in damage or defective operation. Also, consider anti-freezing measures if the temperature is less than 5°C [41°F], because moisture may freeze and result in damage or defective operation.
5. The ball guide, housing, pin, center pin parts use stainless steel, but rust may occur depending on operating environments. Use rust-preventive agent or grease when the product will not be operated for a long term. Refer to the inner structure on page 12 for greasing areas.

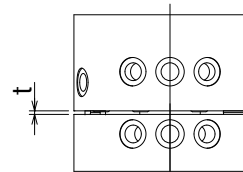
### Installing

1. The mounting surface must be flat. If twists or turns occur, precision will fall and may result air leakage or malfunction.
2. Note that scratches or dents on the mounting surface may damage the parallelism.
3. If there is risk of bolt loosening caused by shock or vibration, consider countermeasures for locking. When using adhesive agent, take care of excessive agent effecting other areas. Adhesive agent leaking into the inner side of the product may result malfunction.
4. When mounting air hands on the mounting surface of the product, make sure piping and wiring does not interfere connecting and separating operation of the Auto Hand Changer.
5. Lock bolts accordingly to the torque listed on a separate table. To maintain torsional moment characteristics, usage of locating pins are recommended.
6. Take care of wiring so it will not be pulled during robot transfer. If not this may result disconnection or poor contact.

### Connection, Separation

#### < Connection method >

- ① While supplying air to the release port, transfer the master part above to the tool part.
- ② Transfer the master close to the tool until the distance t dimension is below the value listed in the table below.



Model	Allowable connection gap t (cm)
MJB34	0.6
MJB54	1.0
MJB70	1.0

Figure 1) Allowable connection gap

- ③ Exhaust the air from the release port.
- ④ Supply air to the lock port, and connection is complete.

#### < Separation method >

- ① Exhaust air from the lock port at separating position.
  - ② Supply air to the release port.
  - ③ Transfer the master up from the tool to position where both will not contact, and separation is complete.
1. Do not supply air to the tool port during connection and separating operation. Air will blow out and may result to damage of the product or equipment nearby.
  2. Do not apply electric signals to the tool from the master during connection and separating operation. Wear of the electric contact area may become severe.
  3. Make sure not the jam any containment between the mounting surfaces of the master and tool. This will damage the parallelism and effect product life.

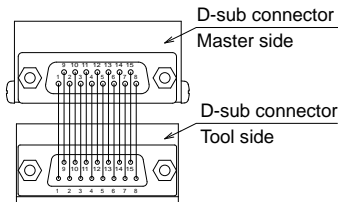
## Maintenance

1. Clean the electrical contacts periodically. If dirt or the like is attached, the electric signal becomes hard to conduct.
2. Clean the connecting surface between the master part and the tool part periodically. If dirt or the like is attached, it will affect air leakage and product life.
3. If electrical contact failure occurs due to the probe, replace the probe. You can order as an additional part.

## Electrical Interface

### ● Solder terminal type

Please connect to each probe and contact pin by soldering.  
Recommended wire diameter:  
AWG 24 or smaller wire diameter



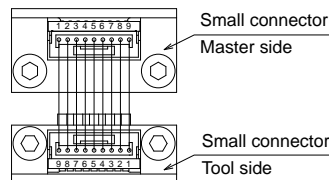
### ● D-sub connector

The numbers of 15 electrical contact pins are connected so as to match with the master part and tool part as well.

For the connection D-sub connector, use the following equivalent.  
DDK Ltd. brand 17JE-23150,  
HIROSE ELECTRIC brand RDAB-15P

### ● Small connector

The numbers of 9 electrical contact pins are connected reversed and connected at the master part and the tool part.



For the connector for connection, please use the following equivalent.  
J.S.T.MFG.CO.,LTD. brand  
Connector : GHR-09V-S, Contact : SSSL-002T-P0.2,  
Crimp tool : YRS-1590

## Teaching

1. When teaching, the position tolerance between the master part and the tool part should be within the following range.  
In that case, please do not fix the tool part completely.

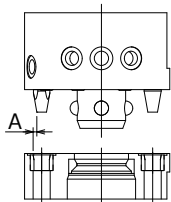


Figure 2) Allowable horizontal tolerance

Model	Allowable horizontal tolerance A (mm)
MJB34	± 0.7
MJB54	± 1.0
MJB70	± 1.6

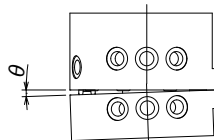


Figure 3) Allowable inclination direction tolerance

Model	Allowable inclination direction tolerance $\theta$ (deg)
MJB34	1.5
MJB54	1.5
MJB70	1.5

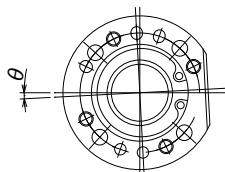
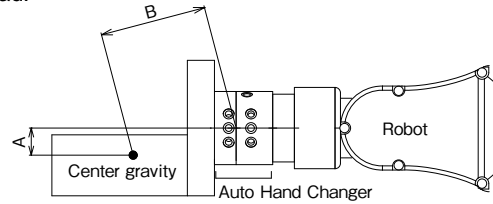


Figure 4) Allowable rotation direction tolerance

Model	Allowable rotation direction tolerance $\theta$ (deg)
MJB34	± 3
MJB54	± 2
MJB70	± 3

## Model selection procedure

Please select models so that the mass moment of inertia does not exceed allowable moment at maximum acceleration during automatic operation of the robot in addition to not exceeding payload.



### ● Calculation example

< The application conditions >

A=0.1m

B=0.3m

W=3kg (Weight of tool side)

Acceleration / Deceleration speed=19.6m/s<sup>2</sup> (at 2G)

- Weight of tool side (including transported workpiece)  
3kg
  - Bending moment  
 $3\text{kg} \times 19.6\text{m/s}^2 \times 0.3\text{m} = 17.64\text{N} \cdot \text{m}$
  - Torsional moment  
 $3\text{kg} \times 19.6\text{m/s}^2 \times 0.1\text{m} = 5.88\text{N} \cdot \text{m}$
- Allowable bending moment of MJB34 is 5N·m,  
Allowable bending moment of MJB54 is 30N·m,  
Therefore select MJB54.

## Tightening torque

### ● Mounting MJB body

Model	Thread size	Tightening torque (N·m)
MJB34M MJB34T MJB34TC	M3	0.63
MJB54M MJB54T MJB54TC	M5	3
MJB70M MJB70T MJB70TC	M5	3

### ● Mounting Electrical interface

Type	Model	Electrical interface		Cover		Adapter	
		Thread size	Tightening torque (N·m)	Thread size	Tightening torque (N·m)	Thread size	Tightening torque (N·m)
Solder terminal	MJBE-PM(-34) MJBE-PT(-34)	M3	0.32	M2	0.09	M3	0.63
Small connector	MJBE-CM(-34) MJBE-CT(-34)	M3	0.32	—	—	M3	0.63
D-sub connector	MJBE-DM(-54) MJBE-DT(-54)	M3	0.32	—	—	M3	0.63

### ● Mounting fitting

Model	Thread size	Tightening torque (N·m)
MJB34M MJB34T MJB34TC	M3	0.7
MJB54M MJB54T MJB54TC	M5	1.0 ~ 1.5
MJB70M MJB70T MJB70TC	M5	1.0 ~ 1.5

## Handling Instructions and Precautions (Compliance Light)



### General precautions

#### Piping

Before performing piping work on the product, thoroughly flush the inside of the pipes (blow out with compressed air). Machining chips, sealing tape, rust and other debris remaining from the piping work may result in air leaks and malfunctions.

#### Air supply

1. Use air as the medium. For the use of any other medium, consult your nearest Koganei sales office.
2. Air used for the product should be clean air that contains no degraded compressor oil, etc. Install an air filter (filtration of 40  $\mu\text{m}$  or less) near the product to remove collected liquid or dust. Also drain the air filter periodically. If liquid or dust gets into the product, it may cause defective operation.

#### Lubrication

1. The cylinder can be used without lubrication, however, if lubrication, such as a lubricator, is used, use turbine oil type 1 (ISO VG32) or an equivalent. Avoid using spindle oil or machine oil.
2. Never apply lubrication to the sliding parts of the swing type. Doing so may cause defective operation.

#### Environment

1. Cover the unit when using it in locations where it might be subject to excessive dust, dripping water, dripping oil, etc.
2. Do not use the product in environments which may be corrosive. Using the cylinder in these types of environments may result in damage or defective operation.
3. Do not use it in excessively dry conditions.
4. Do not use the cylinder if the ambient temperature is over 60°C [140°F], doing so may result in damage or defective operation. Also, consider anti-freezing measures if the temperature is less than 5°C [41°F], because moisture may freeze and result in damage or defective operation.

#### Handling

1. Confirm that there is no residual pressure in the product before starting maintenance work.
2. Displacement should not exceed the allowed travel in any direction. It could result in damaged or broken a product that results in operation shutdown or degraded performance.
3. To lock or unlock the function for error correction (compliance), switch between applying and not applying air pressure. When inserting or pushing, do so in an unlocked state with no air pressure applied. When moving, do so in a locked state with air pressure applied. Moreover, install a shock absorber, etc., where the movement comes to a standstill to ensure as smooth a stop as possible. Sudden stops may cause the lock to disengage, and reduce the centripetal accuracy.
4. Use within the range for the maximum load capacity. Using this unit while exceeding the maximum load capacity may cause wear or degradation to the sliding parts.
5. The value for the allowable load is a static load. Treat it as a temporary load in a stationary state. Ensure that there are sufficient allowances if the unit is subjected to impacts.
6. The parallel type can also be used in a lower position. When using it in a lower position, use it on the center of the product and do not allow it to hang over. The mounted load should be less than the maximum load capacity.

7. The center position when pressure is applied to the plate and the center position when pressure is not applied may be misaligned.
8. Make sure the mounting load is mounted within the outer diameter of the center position of the plate, and avoid usage of overhang situations. This can cause wear or deterioration of sliding portions.
9. Withstand load and withstand moment of each product without centripetal force (-N) is the same with listed value in the graph (reference).

#### Installing

1. Use this unit in a horizontal position when no air pressure is applied (unlocked). The mounting surface should be flat. If the cylinder twists or bends when mounted, not only will it be inaccurate, but there may be air leaks and defective operation.
2. Note that if the product's mounting surface is scratched or dented it can adversely affect flatness.
3. Be sure that the unit and the mounting bolts are strong enough.
4. In cases where loosening of screws due to impact and/or vibration may be a factor, consider looseness prevention measures. Be careful that adhesive spreads out evenly. If the adhesive gets into the product, it may cause defective operation.
5. Be careful that error correction (compliance) is not obstructed by piping and wiring when mounting hands, etc., to the mounting surface.

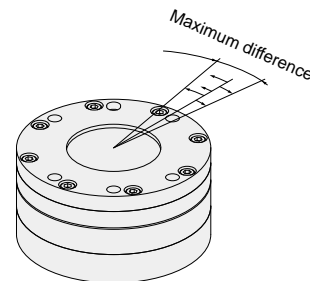
#### Repeatability

The plate is first moved to a particular direction when there is no load and air supply, and then the stop position is measured after air is supplied. This measurement method is repeated 10 times, and the maximum difference is calculated.  $\pm 1/2$  of the calculated maximum difference is repeatability.

#### Repeatable angle accuracy

##### Repeatability of both directions

The plate is first rotated to a right and left when there is no load and air supply, and then the stop angle is measured after air is supplied. This measurement method is repeated 10 times, and the maximum difference is calculated.  $\pm 1/2$  of the calculated maximum difference is repeatable angle accuracy.

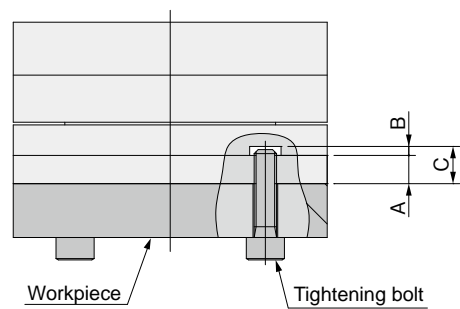


Repeatability of both directions

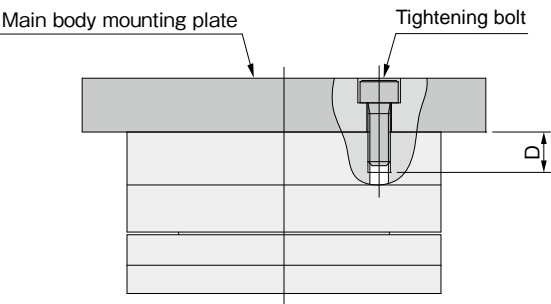
Handling Instructions and Precautions (Compliance Light)

Tightening torque

● Mounting a workpiece



● Installing the main unit



Type	Model	Bolt	Maximum tightening torque (N·m)	A (mm)	B (mm)	C (mm)	D (mm)
Parallel type	CPLHB34F	M3 × 0.5	0.63	4.3	1	5.3	6
	CPLHB54F	M5 × 0.8	3	5.2	1.5	6.7	10
	CPLHB70F	M5 × 0.8	3	6.3	1.5	7.8	11
Swing type	CPLHB34S	M3 × 0.5	0.63	4.8	1	5.8	6
	CPLHB54S	M5 × 0.8	3	6.7	1.5	8.2	10
	CPLHB70S	M5 × 0.8	3	7.8	1.5	9.3	11

# Auto Hand Changer

## MJB Series



### Specifications

#### ● Specifications of main unit

Basic type		Master side	MJB34M		MJB54M		MJB70M	
		Tools side	MJB34T	MJB34TC	MJB54T	MJB54TC	MJB70T	MJB70TC
Item								
Maximum load capacity <sup>(※)</sup>		kg	3		10		20	
Connection force <sup>(※)</sup>		N	500		1300		3200	
Mass	Master side	g	45		160		305	
	Tools side	g	20		75		165	
	Both sides	g	65		235		470	
Diameter of connection port			M3		M5		M5	
Allowable bending moment <sup>(※)</sup>		N・m	5		30		75	
Allowable twisting moment		N・m	15		45		100	
Operating pressure range		MPa	0.35～0.7					
Operating type			Double acting (Fall prevention)					
Media			Air					
Proof pressure		MPa	1.05					
Operating temperature range		℃	0～60					
Lubrication			Not required					
Repeatability		mm	±0.01					
Pneumatic interface	Operating pressure range	MPa	-0.1～0.7					
	Number ・ Size		4 ・ M3	3 ・ M3	6 ・ M5	5 ・ M5	10 ・ M5	9 ・ M5
Electric interface	Solder terminal (15P)		○		○		○	
	Small connector (9P)		○		○		○	
	D-sub (15P)		—		○		○	

※ When supplied pressure is 0.5MPa

○ : Selectable, — : Not selectable

#### ● Electric interface specifications

Basic type		Master side	MJBE-PM	MJBE-PM-34	MJBE-CM	MJBE-CM-34	MJBE-DM	MJBE-DM-54
		Tools side	MJBE-PT	MJBE-PT-34	MJBE-CT	MJBE-CT-34	MJBE-DT	MJBE-DT-54
Item								
Connection method			Solder terminal		Small connector		D-sub	
Contact points			Points		15		9	
Rated current			A		3		1	
Mass	Master side	g	11	17	9	15	29	49
	Tools side	g	7	11	8	12	22	35
	Both sides	g	18	28	17	27	51	84

### Mass

#### ● Robot adapter

[g]

Basic Model	RA-MJB34-A	RA-MJB34-B	RA-MJB54-B	RA-MJB54-C	RA-MJB70-C	RA-MJB70-D
Mass	42	63	118	153	150	354

#### ● Adapter for Air Hand

[g]

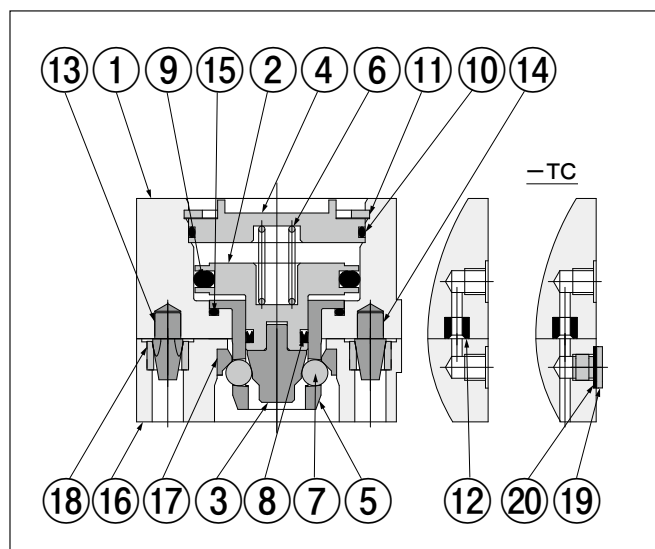
Basic Model	HA-MJB34-A	HA-MJB34-N	HA-MJB54-A	HA-MJB54-N	HA-MJB70-A	HA-MJB70-N
Mass	34	19	83	66	518	129

#### ● Hand adapter for Compliance Light

[g]

Basic Model	HA-CPLHB34-A	HA-CPLHB34-N	HA-CPLHB54-A	HA-CPLHB54-N	HA-CPLHB70-A	HA-CPLHB70-N
Mass	18	33	118	113	183	184

## Inner construction



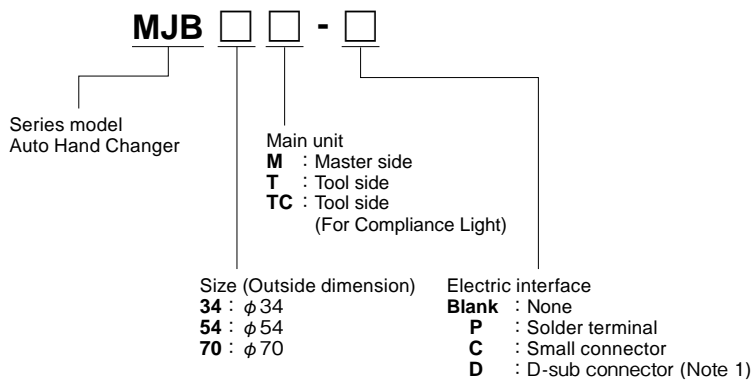
## Major parts and materials

No.	Model Name	MJB34M	MJB54M	MJB70M
①	Master plate	Aluminum alloy (electroless nickel plated)		
②	Piston	Aluminum alloy (anodized)		
③	Center pin	Stainless steel (heat-treated)		
④	Head cover	Aluminum alloy (anodized)		
⑤	Ball guide	Stainless steel (heat-treated)		
⑥	Spring	Piano wire		
⑦	Steel ball	Steel		
⑧	Rod seal	Synthetic rubber (NBR)		
⑨	Piston seal	Synthetic rubber (NBR)		
⑩	O ring seal	Synthetic rubber (NBR)		
⑪	Restraining ring	Steel (electroless nickel plated)		
⑫	Seal	Synthetic rubber (NBR)		
⑬	Diamond pin	Stainless steel (heat-treated)		
⑭	Round pin	Stainless steel (heat-treated)		
⑮	O ring seal	Synthetic rubber (NBR)		

No.	Model Name	MJB34T MJB34TC	MJB54T MJB54TC	MJB70T MJB70TC
⑯	Tool plate	Aluminum alloy (electroless nickel plated)		
⑰	Housing	Stainless steel (heat-treated)		
⑱	Bush	Stainless steel		
⑲	Plug	Stainless steel		
⑳	Seal	Stainless steel, Synthetic rubber (NBR)		

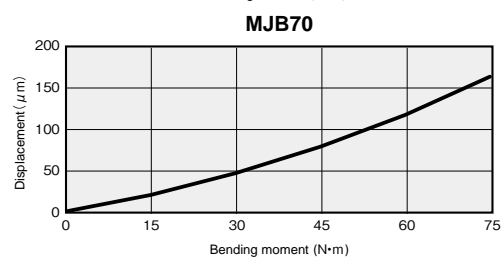
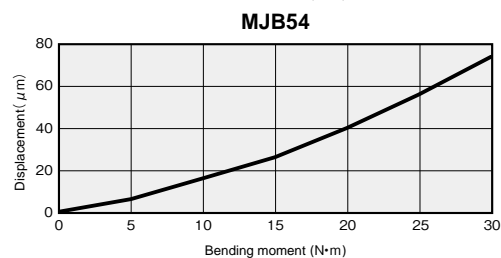
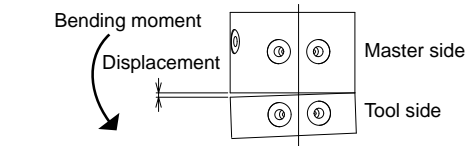
## Order code

### ● Model of main unit

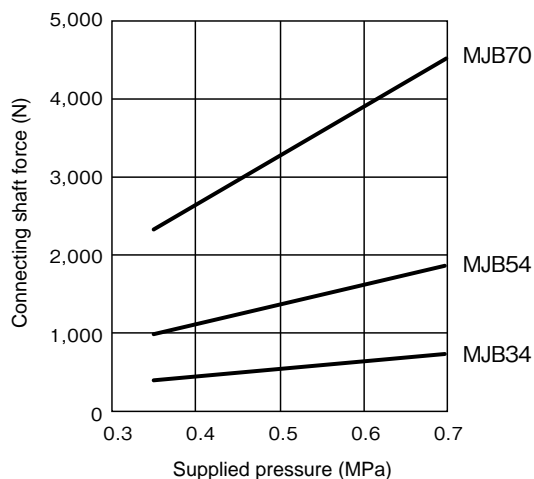


Note 1) Not available for MJB34.

## Bending moment



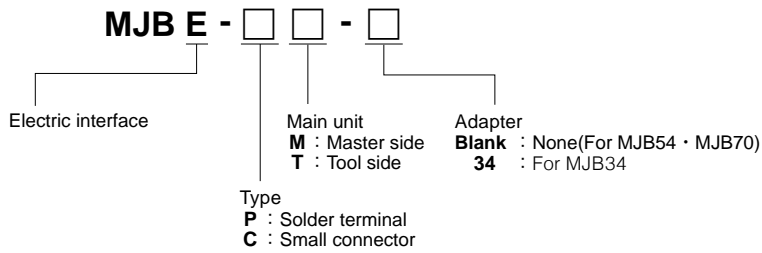
## Connecting shaft force



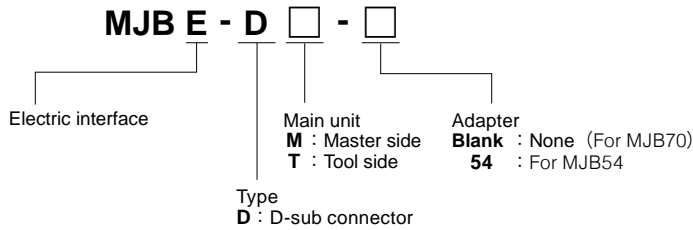
## Additional parts

### ● Electric interface

- Solder terminal, Small connector

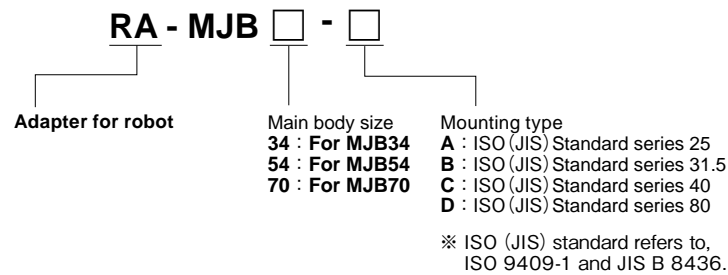


- D-sub connector



### ● Adapter

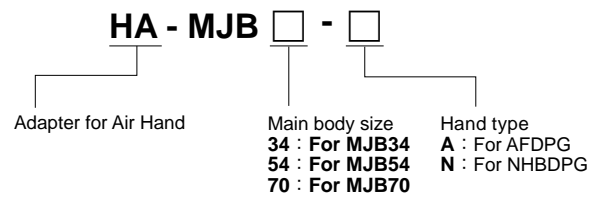
- Robot adapter



※Refer to the table below for combination of main body size and mounting type.

Size \ Type	—A	—B	—C	—D
<b>34</b>	○	○	—	—
<b>54</b>	—	○	○	—
<b>70</b>	—	—	○	○

- Adapter for Air Hand



※Refer to below table for target air hands of the adapter.

Size \ Type	—A	—N
<b>34</b>	For AFDPG-8	For NHBDPG-8
<b>54</b>	For AFDPG-14	For NHBDPG-16
<b>70</b>	For AFDPG-25	For NHBDPG-25

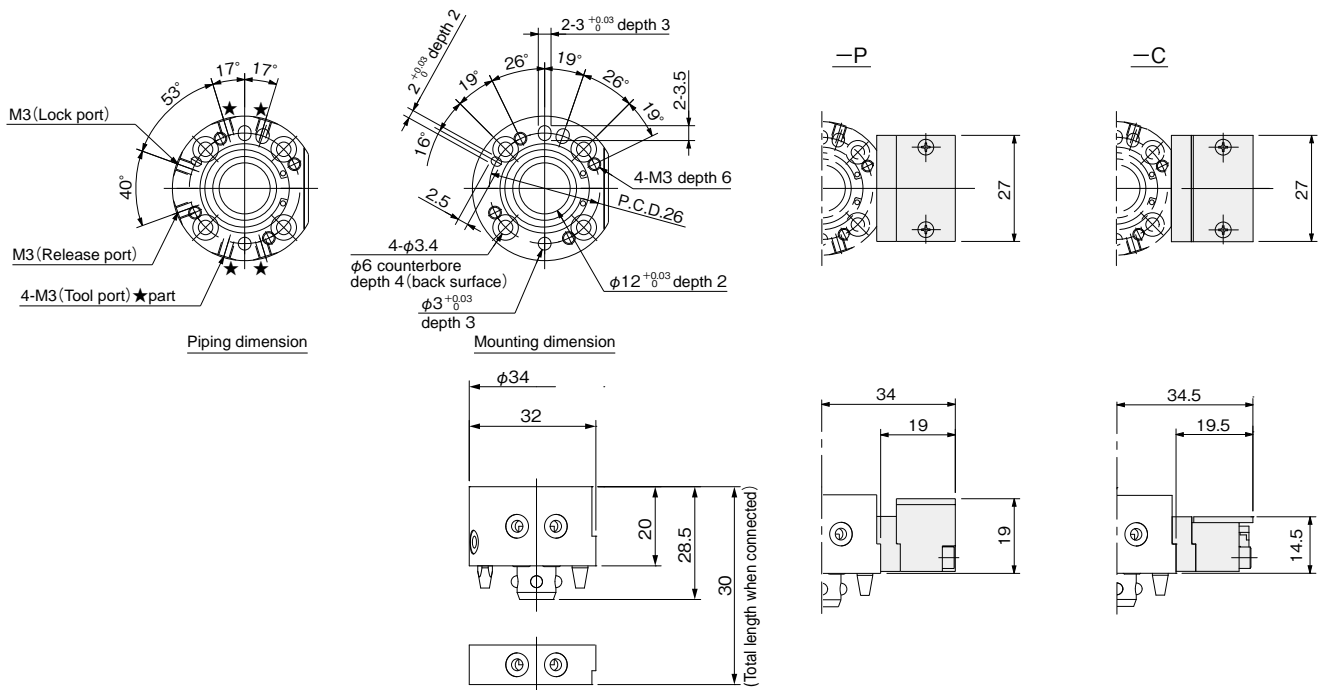
- Sealing for pneumatic interface (10pcs/bag)

**MJBZ - PK**

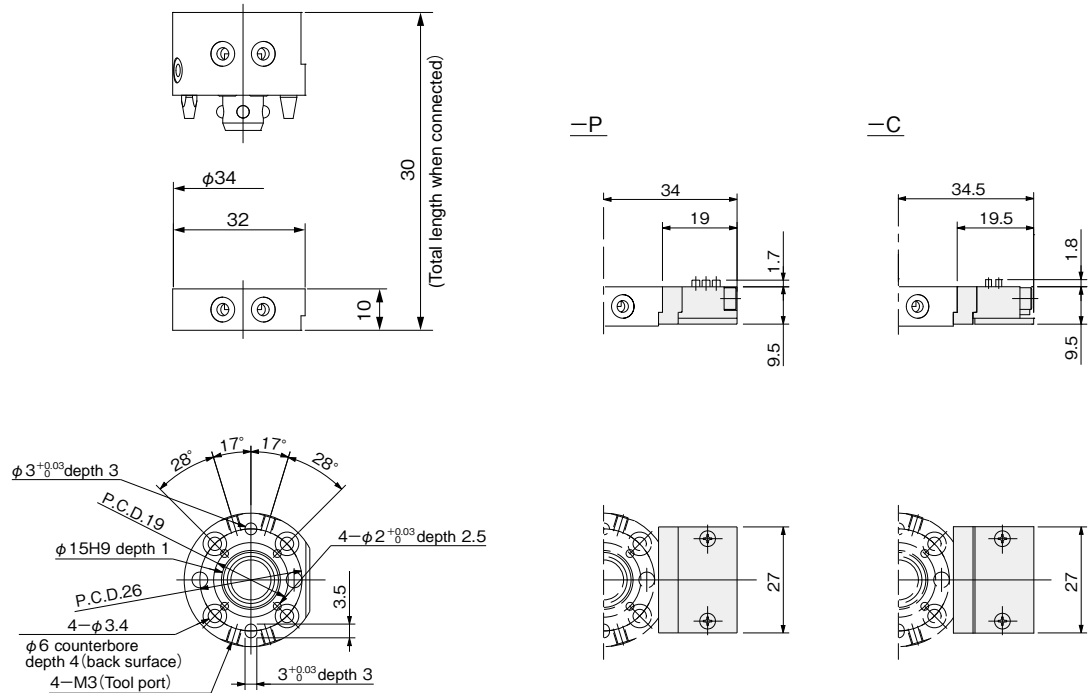
- Common probe terminals for electric interface (15pcs/bag)

**MJBZ - PR**

## MJB34M

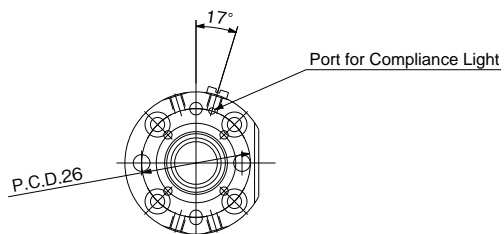


## MJB34T



## MJB34TC

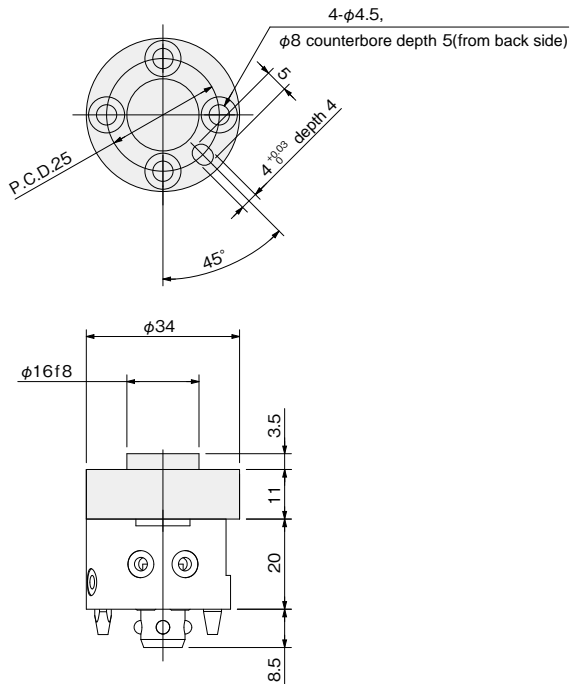
※ Only difference between MJB34T is the below dimension.



## Adapter for MJB34

### ● Dimension when Auto Hand Changer and Robot adapter is combined.

#### MJB34M + RA-MJB34-A



Attached parts

Parallel pin: A type 2x5 1pcs

Parallel pin: A type 4x8 1pcs

Hexagon socket head bolt: M3x0.5 stem length 20 4pcs

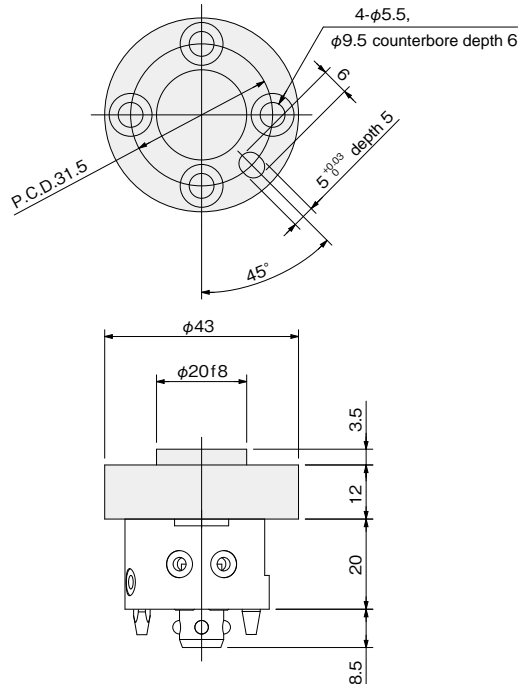
Hexagon socket head bolt: M4x0.7 stem length 12 4pcs

Note: Material is as below

Robot adapter: Aluminum alloy (anodized)

Attached parts listed above: Stainless steel

#### MJB34M + RA-MJB34-B



Attached parts

Parallel pin: A type 2x5 1pcs

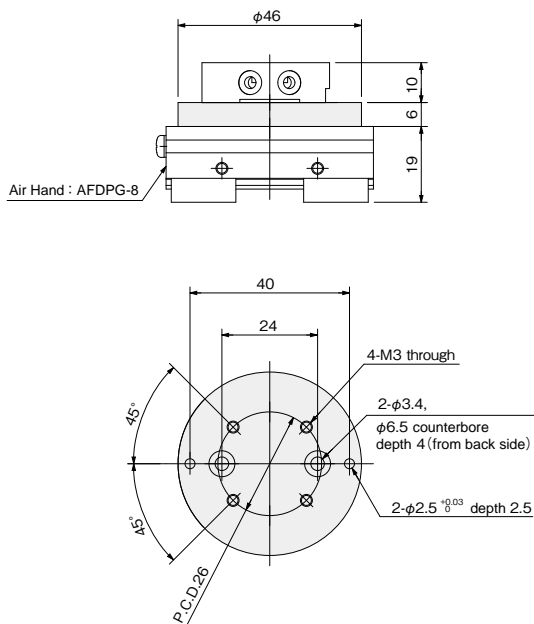
Parallel pin: A type 5x10 1pcs

Hexagon socket head bolt: M3x0.5 stem length 20 4pcs

Hexagon socket head bolt: M5x0.8 stem length 12 4pcs

### ● Dimension when Air Hand and adapter for air hand is combined.

#### MJB34T + HA-MJB34-A



Attached parts

Parallel pin: A type 2.5x5 2pcs

Parallel pin: A type 3x6 1pcs

Hexagon socket head bolt: M3x0.5 stem length 6 2pcs

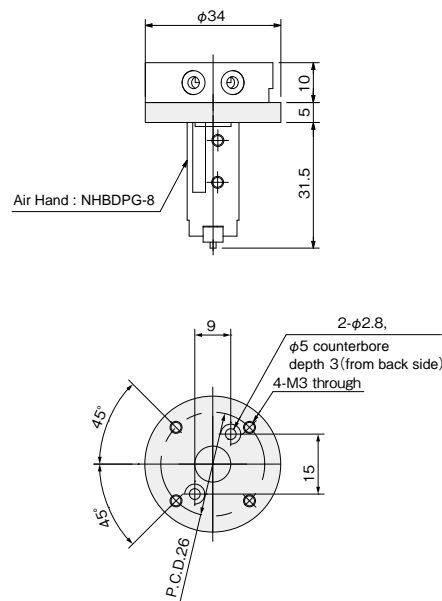
Hexagon socket head bolt: M3x0.5 stem length 10 4pcs

Note: Material is as below

Adapter for Air Hand : Aluminum alloy (anodized)

Attached parts listed above: Stainless steel

#### MJB34T + HA-MJB34-N



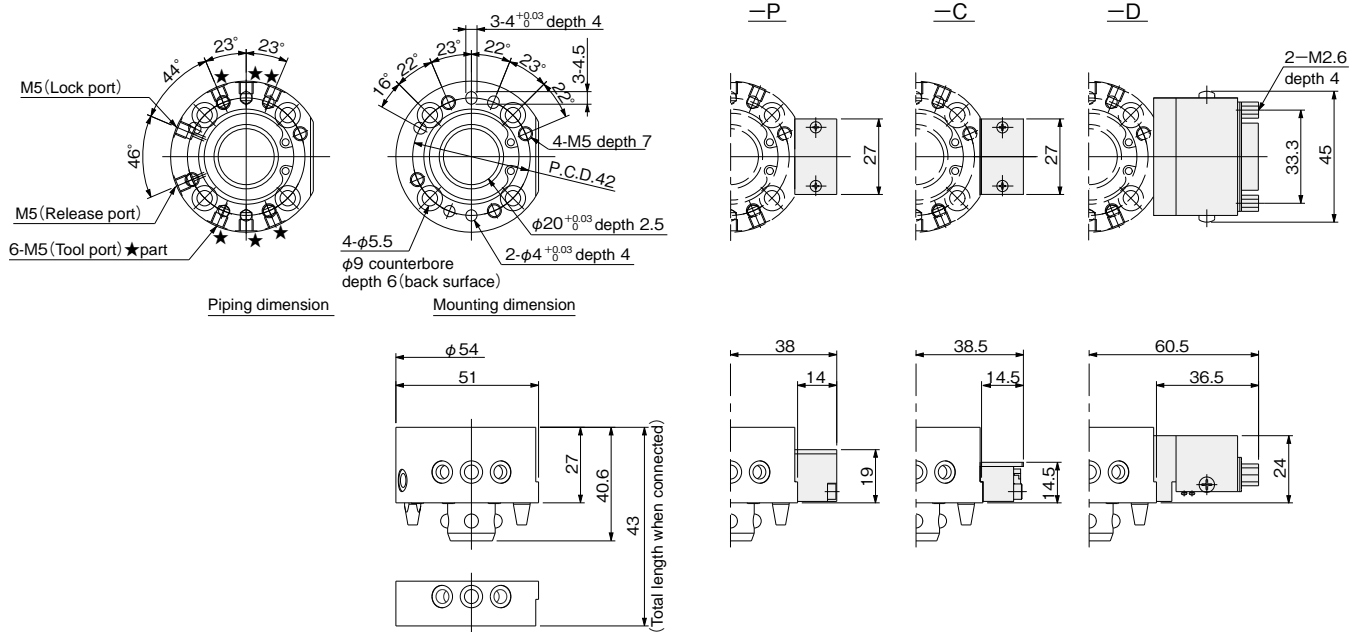
Attached parts

Parallel pin: A type 3x6 2pcs

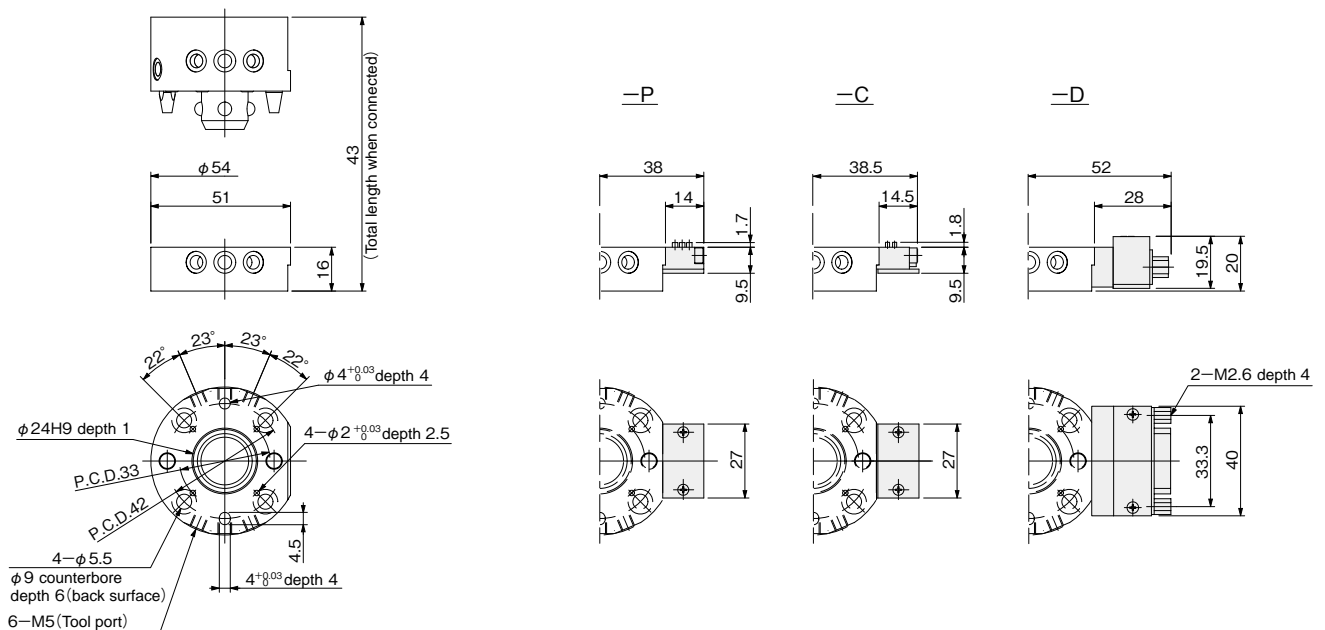
Hexagon socket head bolt: M2.5x0.45 stem length 5 2pcs

Hexagon socket head bolt: M3x0.5 stem length 10 4pcs

## MJB54M

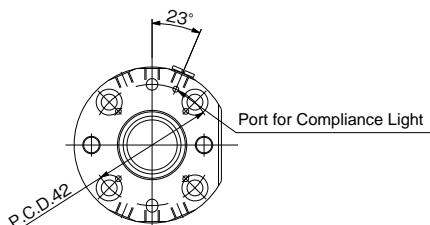


## MJB54T



## MJB54TC

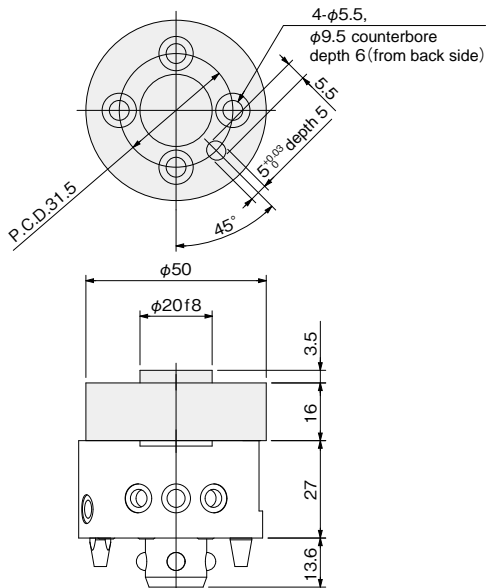
※ Only difference between MJB54T is the below dimension.



## Adapter for MJB54

### ● Dimension when Auto Hand Changer and Robot adapter is combined.

#### MJB54M + RA-MJB54-B



##### Attached parts

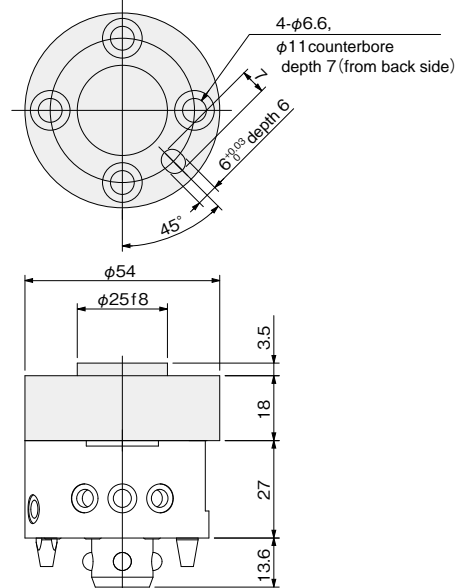
Parallel pin: A type 4x8 1pcs  
 Parallel pin: A type 5x0.8 1pcs  
 Hexagon socket head bolt: M5x0.8 stem length 16 4pcs  
 Hexagon socket head bolt: M5x0.8 stem length 30 4pcs

Note: Material is as below

Robot adapter: Aluminum alloy (anodized)

Attached parts listed above: Stainless steel

#### MJB54M + RA-MJB54-C

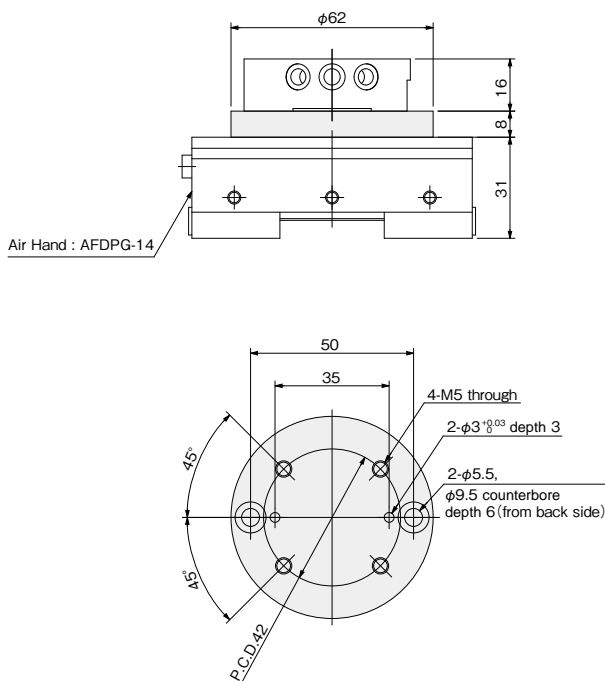


##### Attached parts

Parallel pin: A type 4x8 1pcs  
 Parallel pin: A type 6x12 1pcs  
 Hexagon socket head bolt: M5x0.8 stem length 30 4pcs  
 Hexagon socket head bolt: M6x1 stem length 20 4pcs

### ● Dimension when Air Hand and adapter for air hand is combined.

#### MJB54T + HA-MJB54-A



##### Attached parts

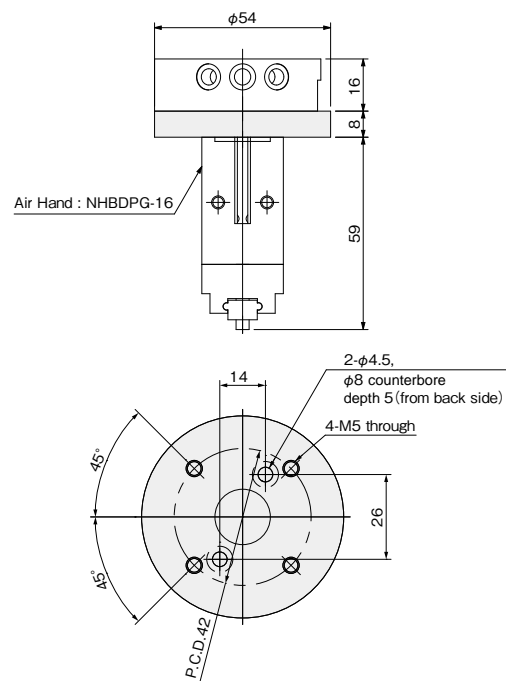
Parallel pin: A type 3x6 1pcs  
 Parallel pin: A type 4x8 1pcs  
 Hexagon socket head bolt: M5x0.8 stem length 8 2pcs  
 Hexagon socket head bolt: M5x0.8 stem length 16 4pcs

Note: Material is as below

Adapter for Air Hand : Aluminum alloy (anodized)

Attached parts listed above: Stainless steel

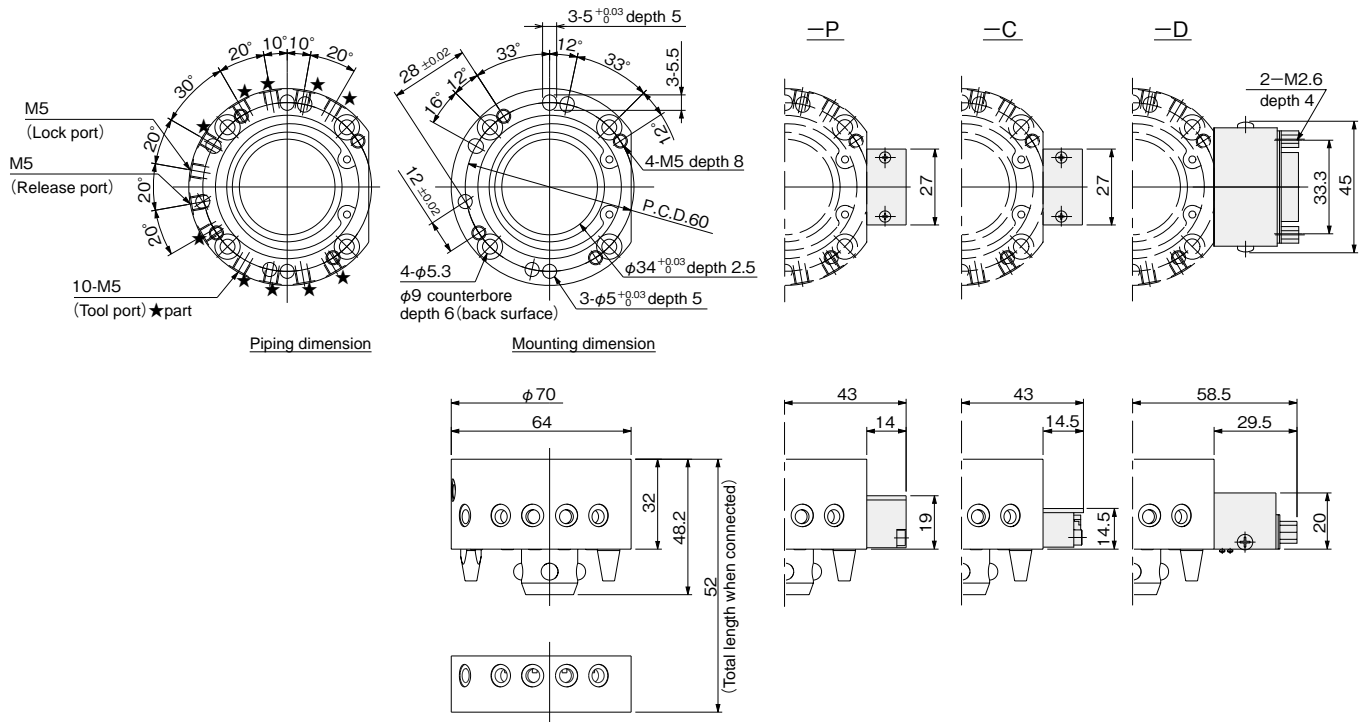
#### MJB54T + HA-MJB54-N



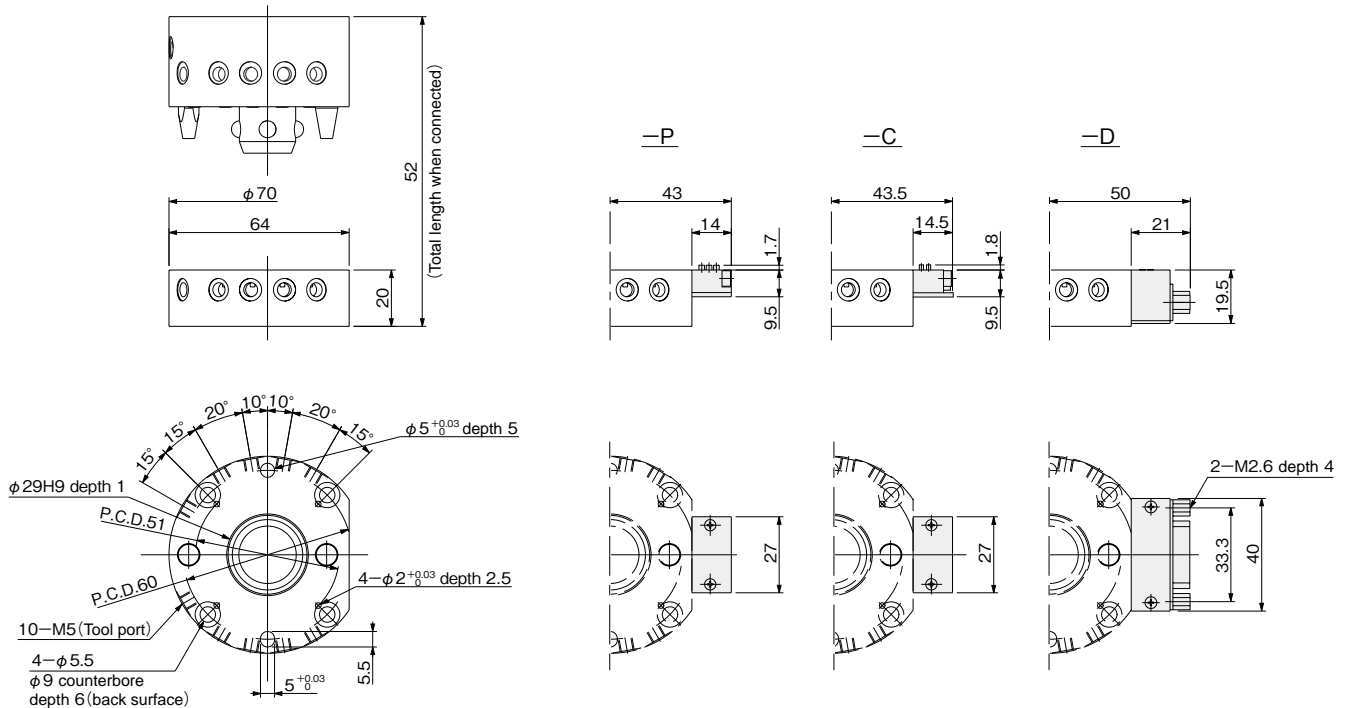
##### Attached parts

Parallel pin: A type 4x8 1pcs  
 Hexagon socket head bolt: M4x0.7 stem length 8 2pcs  
 Hexagon socket head bolt: M5x0.8 stem length 16 4pcs

## MJB70M

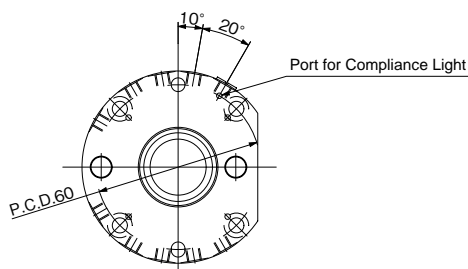


## MJB70T



## MJB70TC

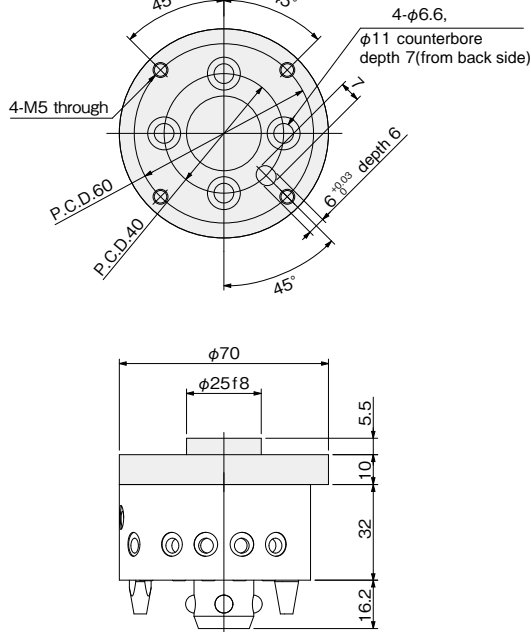
※ Only difference between MJB70T is the below dimension.



## Adapter for MJB70

### ● Dimension when Auto Hand Changer and Robot adapter is combined.

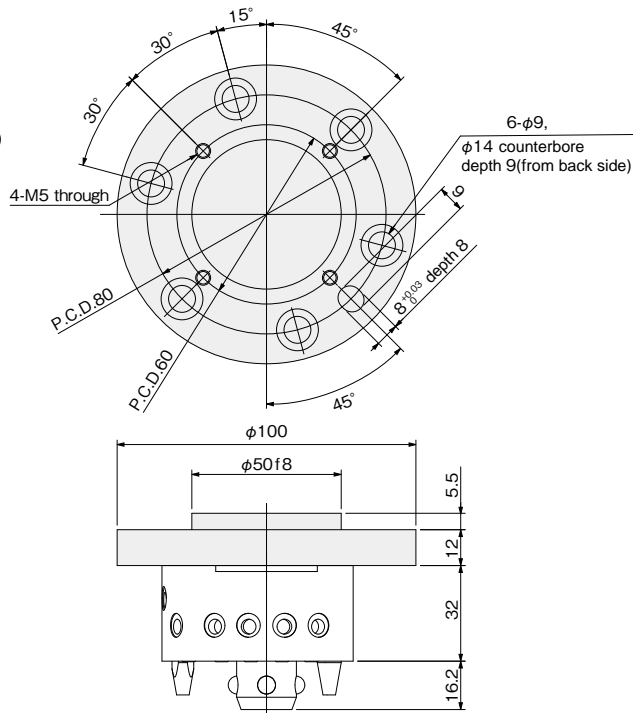
#### MJB70M + RA-MJB70-C



Attached parts  
 Parallel pin: A type 5×10 2pcs  
 Parallel pin: A type 6×12 1pcs  
 Hexagon socket head bolt: M5×0.8 stem length 35 4pcs  
 Hexagon socket head bolt: M6×1 stem length 12 4pcs

Note: Material is as below  
 Robot adapter: Aluminum alloy (anodized)  
 Attached parts listed above: Stainless steel

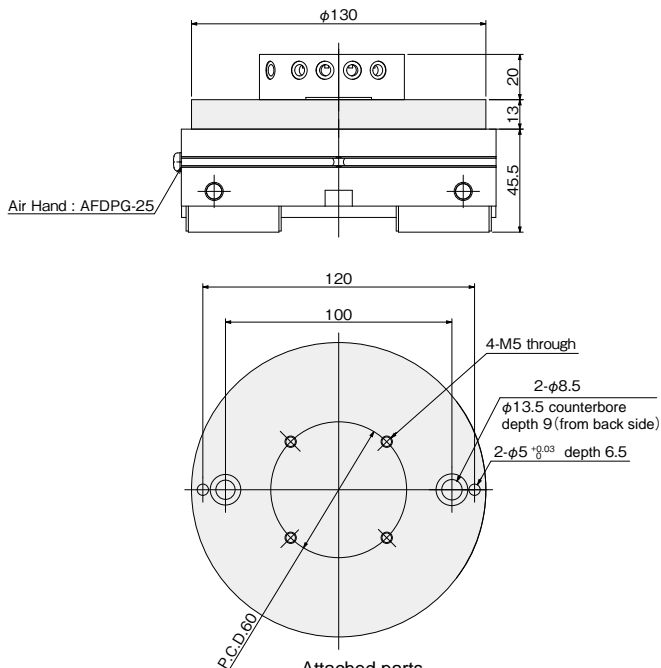
#### MJB70M + RA-MJB70-D



Attached parts  
 Parallel pin: A type 5×10 1pcs  
 Parallel pin: A type 6×12 1pcs  
 Hexagon socket head bolt: M5×0.8 stem length 35 4pcs  
 Hexagon socket head bolt: M8×1.25 stem length 14 6pcs

### ● Dimension when Air Hand and adapter for air hand is combined.

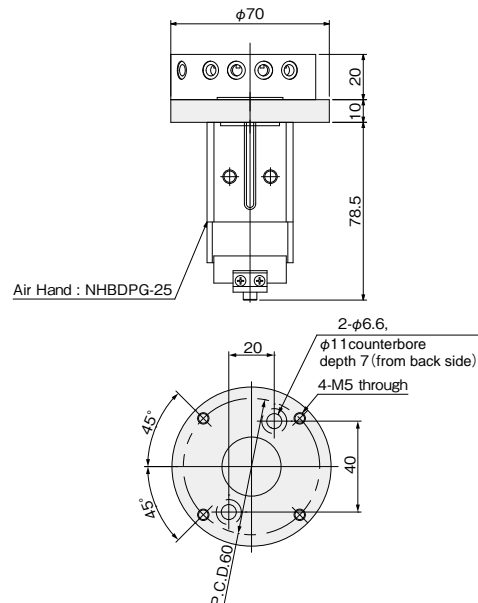
#### MJB70T + HA-MJB70-A



Attached parts  
 Parallel pin: A type 5×10 3pcs  
 Hexagon socket head bolt: M5×0.8 stem length 20 4pcs  
 Hexagon socket head bolt: M8×1.25 stem length 10 2pcs

Note: Material is as below  
 Adapter for Air Hand : Aluminum alloy (anodized)  
 Attached parts listed above: Stainless steel

#### MJB70T + HA-MJB70-N



Attached parts  
 Parallel pin: A type 5×10 1pcs  
 Hexagon socket head bolt: M5×0.8 stem length 20 4pcs  
 Hexagon socket head bolt: M6×1 stem length 12 2pcs

# Compliance Light

## Parallel type for Auto Hand Changer



### 仕様

Basic type		CPLHB34F	CPLHB34F-N	CPLHB54F	CPLHB54F-N	CPLHB70F	CPLHB70F-N	
Items								
Bore size	mm	16		25		40		
Dimensions	mm	φ 34		φ 54		φ 70		
Height	mm	25		31		36		
Mass	g	60		180		360		
Operating type		Single acting type						
Media		Air						
Operating pressure range	MPa	0.2 ~ 0.7						
Proof pressure	MPa	1.05						
Operating temperature range	℃	0 ~ 60						
Diameter of connection port		mm	φ 1.5	φ 2				
Lubrication	Cylinder part	Not required						
	Sliding part	Not required						
Maximum load capacity		kg	1	2		4		
Travel	X – Y	mm	±0.5	±1		±1.5		
	θ (twist)	°	±3	±4				
Centripetal force (when travel is 0.5 mm) <sup>Note1</sup>		N	3	0	5	0	5	0
Repeatability <sup>Note2</sup> (in the direction of X and Y)		P=0.5MPa	mm	±0.05				
Repeatable angle accuracy <sup>Note3</sup> (in the direction of θ )		P=0.5MPa	°	±0.1 (Repeatability of both directions)		±0.05 (Repeatability of both directions)		
Withstand load <sup>Note5</sup>	Pushing direction	N	1,580		2,840		5,150	
	Pulling direction	N	840		1,480		2,980	

Note1: Centripetal force: force that maintains the center position via the restraining ring.

Note 2: Repeatability: Refer to page 9 for details

Note 3: Repeatability angle accuracy: Repeatability of both directions : Refer to page 9 for details

Note 4: A slide may occur between the center of the plate when air is supplied, and not supplied.

Note 5: Use at 1/10 of withstand load value for pressing. Refer to page 9 for details

Note 6: Make sure the mounting load is mounted within the outer diameter of the center position of the plate, and avoid usage of over hang situations.

Note 7: Refer to page 9 for installation and precautions.

### Order code

#### ●Parallel type for Auto Hand Changer

**CPLHB**   **F** -   - **K**

Compliance Light for Auto Hand Changer

Size  
34 : φ 34mm  
54 : φ 54mm  
70 : φ 70mm

Moving direction  
**F** : Parallel movement

Centripetal force  
**Blank** : With centripetal force  
**N** : No centripetal force

Additional parts

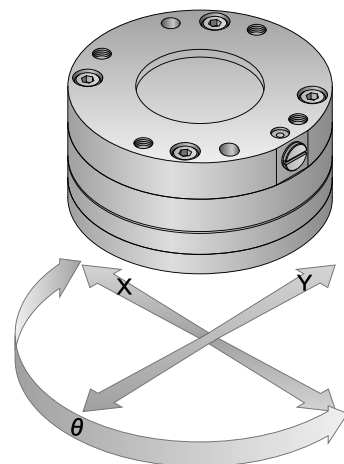
**Blank** : No additional parts

**K** : With additional parts  
(K-CPLHB )

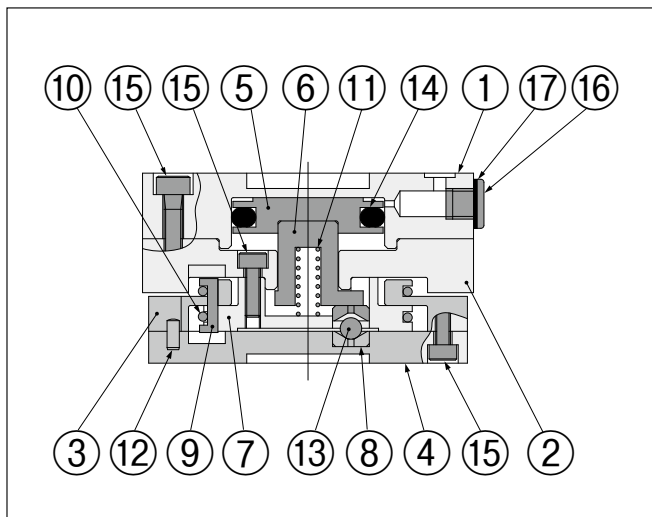
※Refer to page 26 for details

### Moving direction

#### ●X · Y · θ axes



## Inner construction



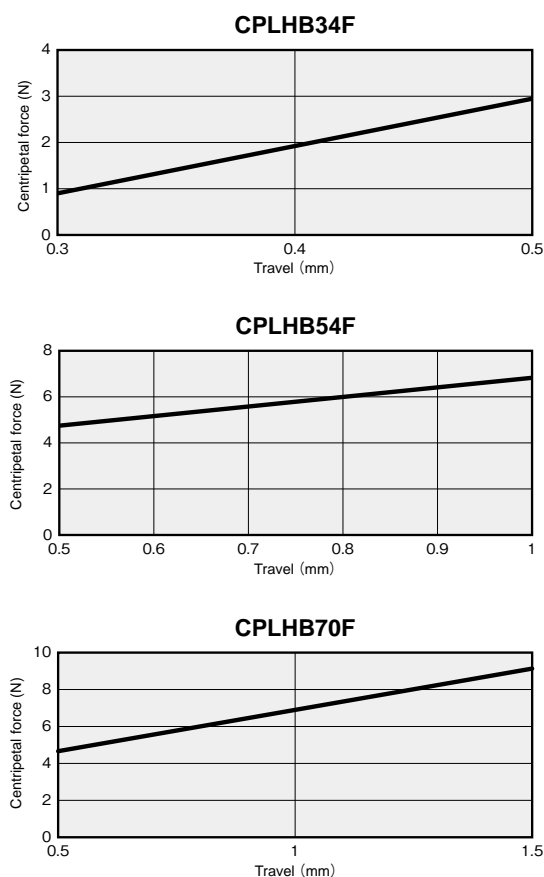
## Major parts and materials

No.	Model Name	CPLHB34F	CPLHB54F	CPLHB70F
①	Main body	Aluminum alloy (electroless nickel plated)		
②	Connected body	Aluminum alloy (electroless nickel plated)		
③	Frame	Aluminum alloy (electroless nickel plated)		
④	Plate	Aluminum alloy (electroless nickel plated)		
⑤	Piston	Aluminum alloy (anodized)		
⑥	Lock piston	Hard steel (electroless nickel plated)		
⑦	Disk	Aluminum alloy (special anti-abrasion treated)		
⑧	Spacer	Stainless steel (heat-treated)		
⑨	Alignment pin	Stainless steel (heat-treated)		
⑩	Restraining ring	Stainless steel		
⑪	Spring	Piano wire		
⑫	Parallel pin	Stainless steel		
⑬	Steel ball	Hard steel		
⑭	Seal	Synthetic rubber (NBR)		
⑮	Bolt	Stainless steel		
⑯	Plug	Stainless steel	Carbon steel (nickel plated)	
⑰	Gasket	Stainless steel and Synthetic rubber (NBR) baking		

## Graph (Reference)

### ●Centripetal force

※Centripetal force : force that maintains the center position via the restraining ring.

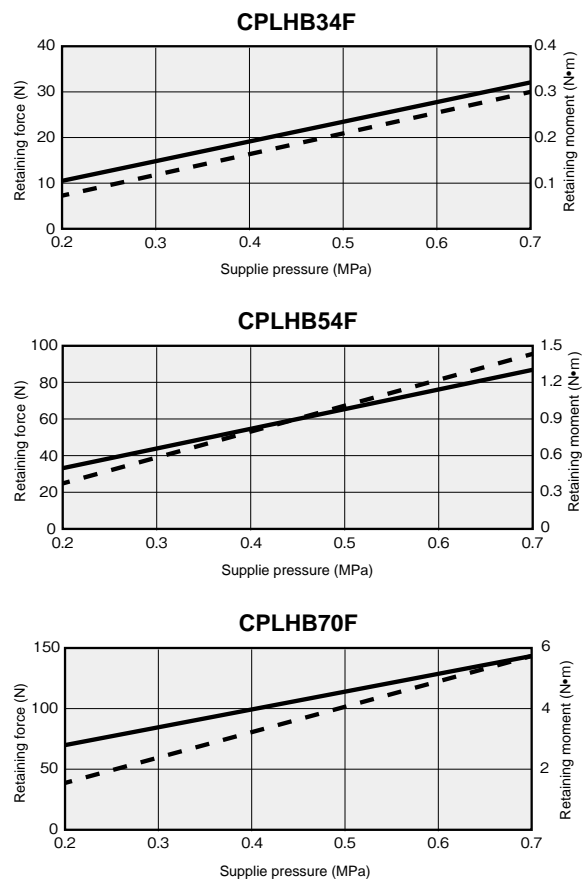


### ●Retaining force, retaining moment

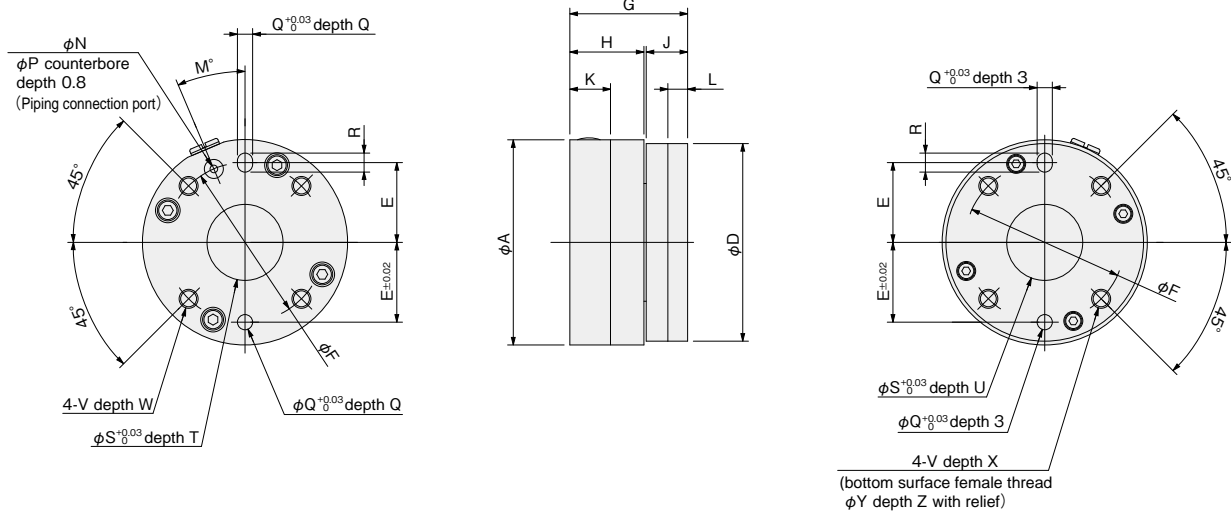
—— Retaining force  
- - - Retaining moment

※Retaining force: The force which retains the center position of X-Y direction when air is supplied.

※Retaining moment: The force which retains the center position of  $\theta$  direction when air is supplied.



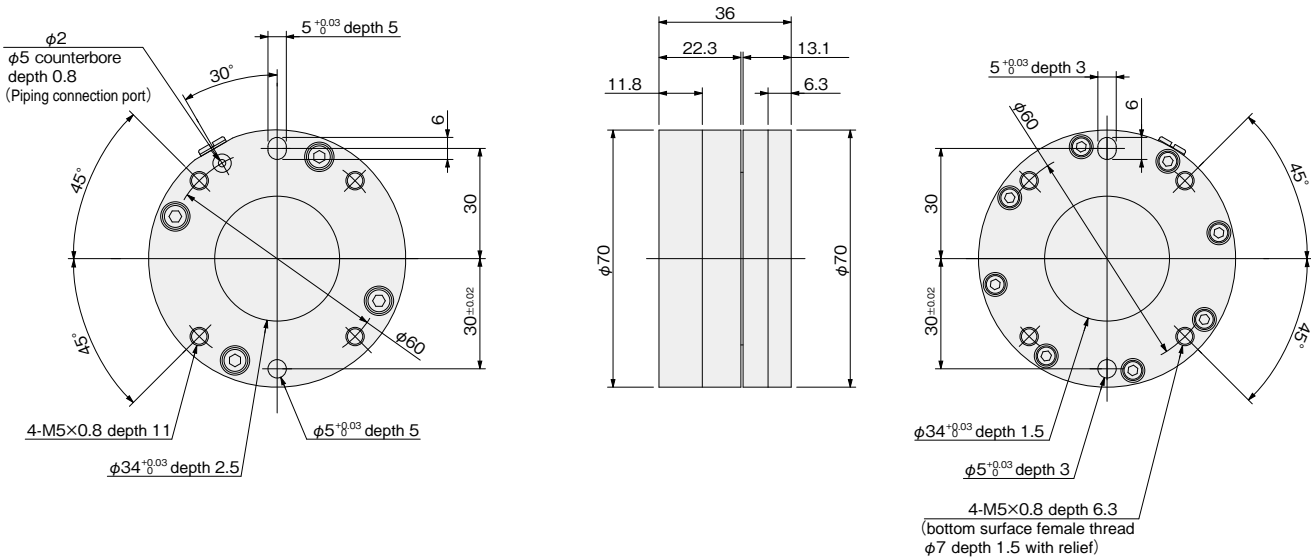
CPLHB34F  
CPLHB54F



Model	Symbol	A	D	E	F	G	H	J	K	L	M	N	P	Q	R
CPLHB34F		34	32	13	26	25	15.9	8.7	8.7	4.3	17	1.5	4	3	4
CPLHB54F		54	52	21	42	31	19.5	10.9	10.7	5.2	23	2	5	4	5

Model	Symbol	S	T	U	V	W	X	Y	Z
CPLHB34F		12	2	1.5	M3 × 0.5	6	4.3	4	1
CPLHB54F		20	2.5	1.5	M5 × 0.8	10	5.2	6	1.5

CPLHB70F



# Compliance Light

## Swing type for Auto Hand Changer



### 仕様

Basic type			CPLHB34S	CPLHB34S-N	CPLHB54S	CPLHB54S-N	CPLHB70S	CPLHB70S-N	
Items									
Bore size			mm	16	25	40			
Dimensions			mm	φ 34	φ 54	φ 70			
Height			mm	26	33	39			
Mass			g	60	190	370			
Operating type			Single acting type						
Media			Air						
Operating pressure range			MPa	0.2 ~ 0.7					
Proof pressure			MPa	1.05					
Operating temperature range			℃	0 ~ 60					
Diameter of connection port			mm	φ 1.5	φ 2				
Lubrication	Cylinder part		Not required						
	Sliding part		Not possible						
Maximum load capacity			kg	1	2	4			
Travel	X – Y		mm	±0.5	±1	±1.5			
	Z		mm	–0.5	–0.5	–0.7			
	θ (Twist)		°	±3	±4				
	α (Bend)	Swing angle		±0.5	±1				
		Inclining abgle		±1.4	±0.7				
Centripetal force (when travel is 0.5 mm) <sup>Note1</sup>			N	3	0	5	0	5	0
Repeatability <sup>Note2</sup> (in the direction of X and Y)		P=0.5MPa	mm	±0.05					
Repeatable angle accuracy <sup>Note3</sup> (in the direction of θ )		P=0.5MPa	°	±0.2(Repeatability of both directions)		±0.1(Repeatability of both directions)			
Withstand load <sup>Note5</sup>	Pushing direction		N	1,580	2,840	5,150			
	Pulling direction		N	840	1,480	2,980			

Note1: Centripetal force : force that maintains the center position via the restraining ring.

Note 2: Repeatability: Refer to page 9 for details

Note 3: Repeatable angle accuracy: Repeatability of both directions : Refer to page 9 for details

Note 4: A slide may occur between the center of the plate when air is supplied, and not supplied.

Note 5: Use at 1/10 of withstand load value for pressing. Refer to page 9 for details

Note 6: Make sure the mounting load is mounted within the outer diameter of the center position of the plate, and avoid usage of over hang situations.

Note 7: Refer to page 9 for installation and precautions.

### Order code

#### ●Swing type for Auto Hand Changer

**CPLHB**   **S** -   - **K**

Compliance Light for Auto Hand Changer

Size  
34 : φ 34mm  
54 : φ 54mm  
70 : φ 70mm

Moving direction  
**S** : Swing movement

Centripetal force  
**Blank** : With centripetal force  
**N** : No centripetal force

Additional parts

**Blank** : No additional parts

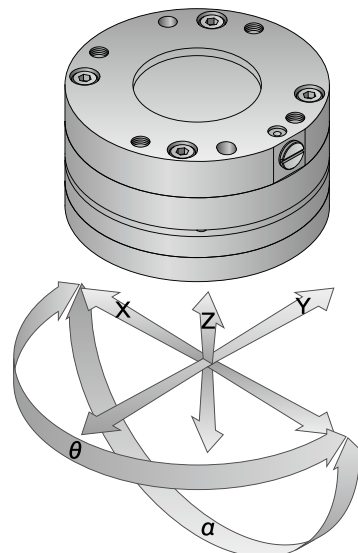
**K** : With additional parts

(K-CPLHB□)

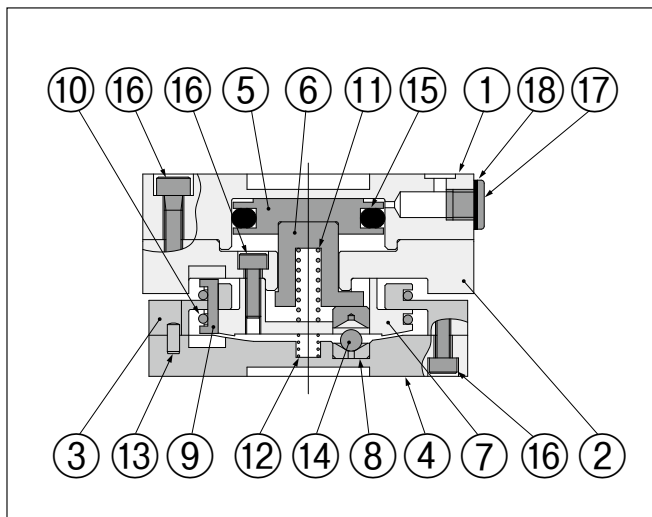
※Refer to page 26 for details

### Moving direction

#### ●X · Y · Z · θ · α axes



## Inner construction



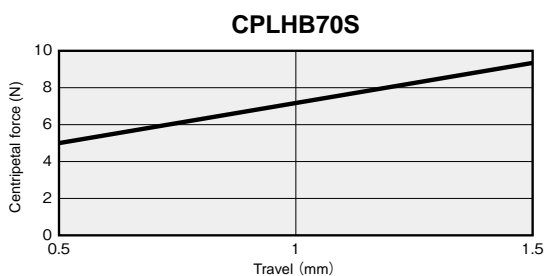
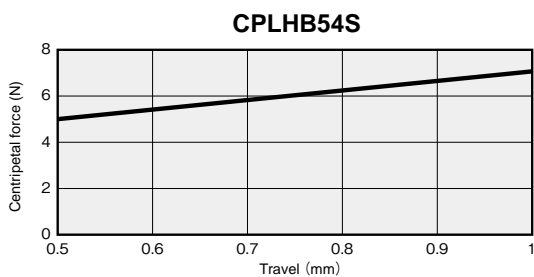
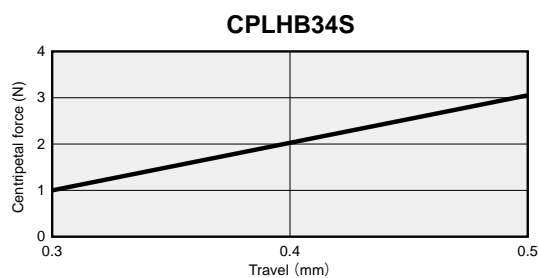
## Major parts and materials

No.	Model Name	CPLHB34S	CPLHB54S	CPLHB70S
①	Main body	Aluminum alloy (electroless nickel plated)		
②	Connected body	Aluminum alloy (electroless nickel plated)		
③	Frame	Aluminum alloy (electroless nickel plated)		
④	Plate	Aluminum alloy (electroless nickel plated)		
⑤	Piston	Aluminum alloy (anodized)		
⑥	Lock piston	Hard steel (electroless nickel plated)		
⑦	Disk	Aluminum alloy (special anti-abrasion treated)		
⑧	Spacer	Stainless steel (heat-treated)		
⑨	Alignment pin	Stainless steel (heat-treated)		
⑩	Restraining ring	Stainless steel		
⑪	Spring	Piano wire		
⑫	Spring	Stainless steel		
⑬	Parallel pin	Stainless steel		
⑭	Steel ball	Hard steel		
⑮	Seal	Synthetic rubber (NBR)		
⑯	Bolt	Stainless steel		
⑰	Plug	Stainless steel	Carbon steel (nickel plated)	
⑱	Gasket	Stainless steel and Synthetic rubber (NBR) baking		

## Graph (Reference)

### ●Centripetal force

※Centripetal force : force that maintains the center position via the restraining ring.

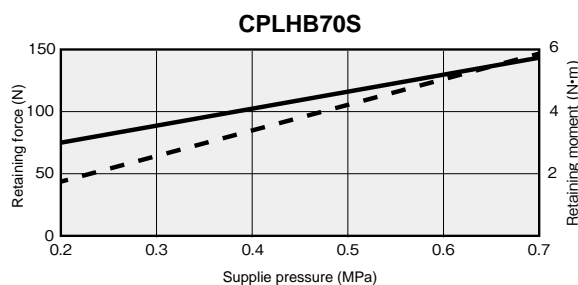
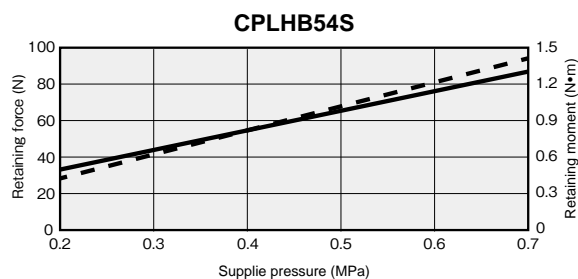
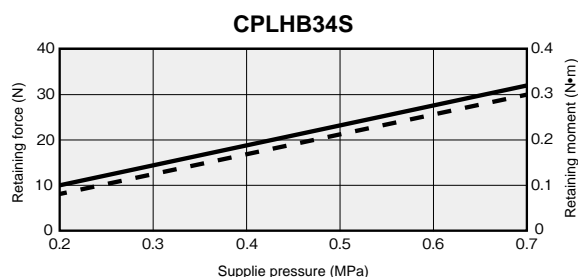


### ●Retaining force, retaining moment

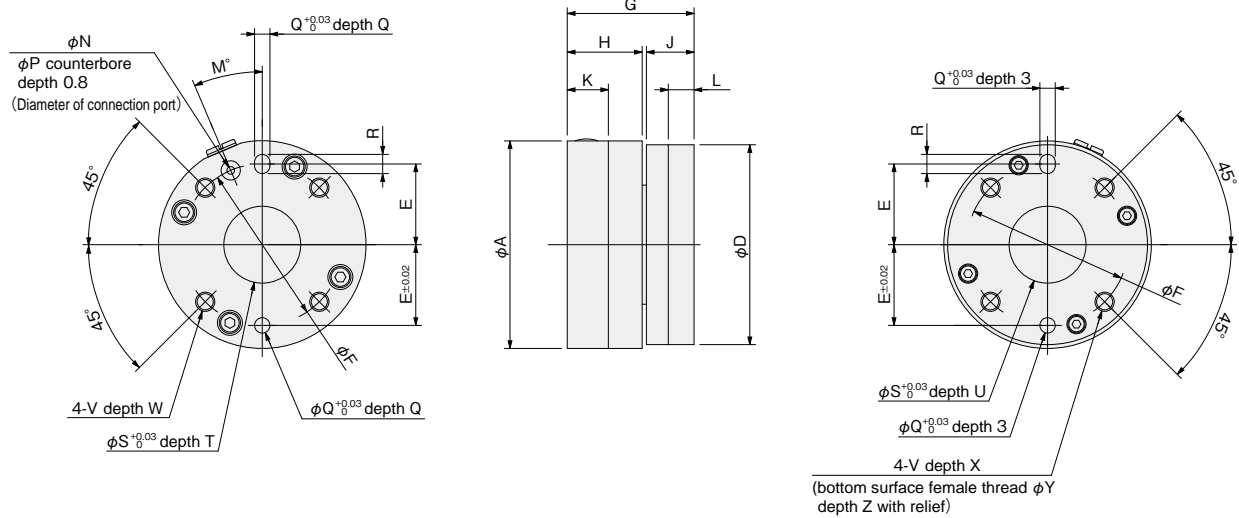
— Retaining force  
- - - Retaining moment

※Retaining force : The force which retains the center position of X-Y direction when air is supplied.

※Retaining moment : The force which retains the center position of  $\theta$  direction when air is supplied.



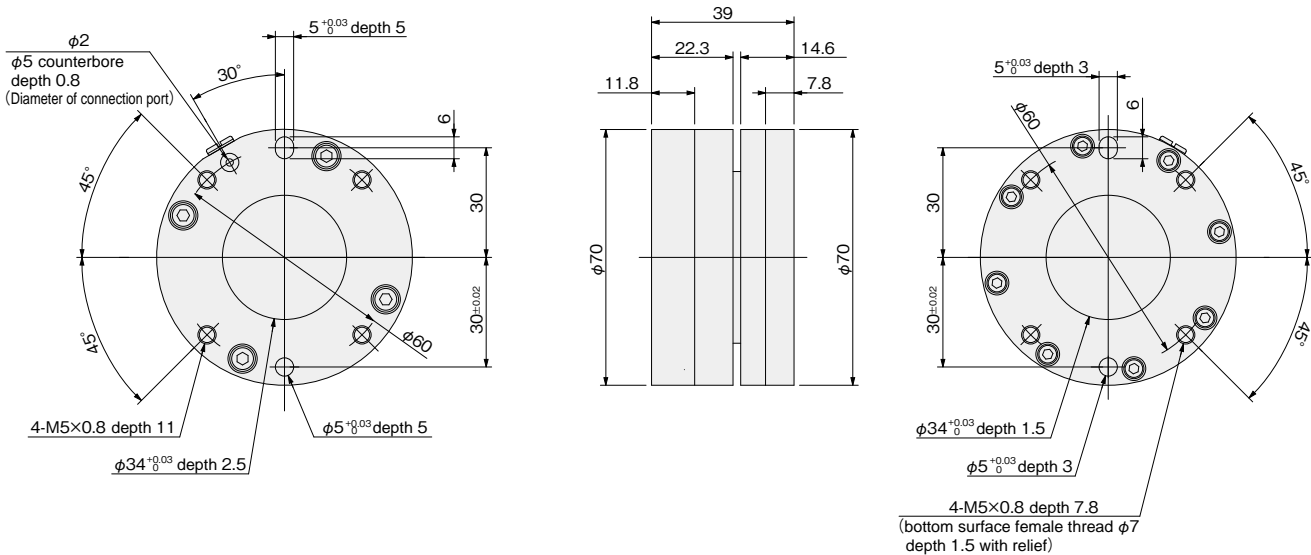
CPLHB34S  
CPLHB54S



Model	Symbol	A	D	E	F	G	H	J	K	L	M	N	P	Q	R
CPLHB34S		34	32	13	26	26	15.9	9.2	8.7	4.8	17	1.5	4	3	4
CPLHB54S		54	52	21	42	33	19.5	12.4	10.7	6.7	23	2	5	4	5

Model	Symbol	S	T	U	V	W	X	Y	Z
CPLHB34S		12	2	1.5	M3 × 0.5	6	4.8	4	1
CPLHB54S		20	2.5	1.5	M5 × 0.8	10	6.7	6	1.5

CPLHB70S



## Additional parts for Compliance Light

### ● Additional parts

- Set for mounting Auto Hand Changer

#### K-CPLHB 34

34 : For CPLHB34  
54 : For CPLHB54  
70 : For CPLHB70

#### [Contents of the set]

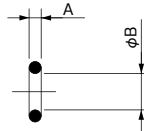
- SRK-CPLHB□
- P-CPLHB□
- AD-CPLHB□
- BLT-CPLHB□

### ● Single part

- Seal for connecting Auto Hand Changer

#### SRK-CPLHB 34

34 : For CPLHB34 (1pcs)  
54 : For CPLHB54 (1pcs)  
70 : For CPLHB70 (1pcs)



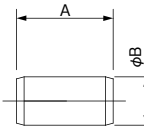
Model	A	B	Material
SRK-CPLHB34	1	2	NBR
SRK-CPLHB54	1	3	NBR
SRK-CPLHB70	1	3	NBR

- Locating pin



#### P-CPLHB 34

34 : For CPLHB34 (2pcs)  
54 : For CPLHB54 (2pcs)  
70 : For CPLHB70 (2pcs)



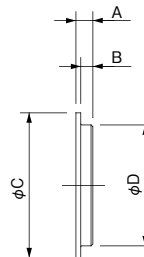
Model	A	B	Size	Material
P-CPLHB34	6	3h8 ( $-\frac{0}{0.014}$ )	JIS B 1354 Type B 3x6	Stainless steel
P-CPLHB54	8	4h8 ( $-\frac{0}{0.018}$ )	JIS B 1354 Type B 4x8	Stainless steel
P-CPLHB70	10	5h8 ( $-\frac{0}{0.018}$ )	JIS B 1354 Type B 5x10	Stainless steel

- Locating plate



#### AD-CPLHB 34

34 : For CPLHB34  
54 : For CPLHB54  
70 : For CPLHB70



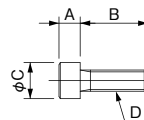
Model	A	B	C	D	Material
AD-CPLHB34	2.3	1.5	15g6 ( $-\frac{0.006}{0.017}$ )	12g6 ( $-\frac{0.006}{0.017}$ )	Aluminum alloy
AD-CPLHB54	2.8	2	24g6 ( $-\frac{0.007}{0.020}$ )	20g6 ( $-\frac{0.007}{0.020}$ )	Aluminum alloy
AD-CPLHB70	3.3	1	34g6 ( $-\frac{0.009}{0.025}$ )	29g6 ( $-\frac{0.007}{0.020}$ )	Aluminum alloy

- Mounting bolt



#### BLT-CPLHB 34

34 : For CPLHB34 (4pcs)  
54 : For CPLHB54 (4pcs)  
70 : For CPLHB70 (4pcs)



Model	A	B	C	D	Material
BLT-CPLHB34	3	10	5.5	M3×0.5	Stainless steel
BLT-CPLHB54	5	16	8.5	M5×0.8	Stainless steel
BLT-CPLHB70	5	20	8.5	M5×0.8	Stainless steel

### ● Adapter set for Air hand

#### HA-CPLHB 34 - A

34 : For CPLHB34  
54 : For CPLHB54  
70 : For CPLHB70

A : For AFDPG  
N : For NHBPG

※Adapter set for Air hand includes locating pin, adapter, and mounting bolt.

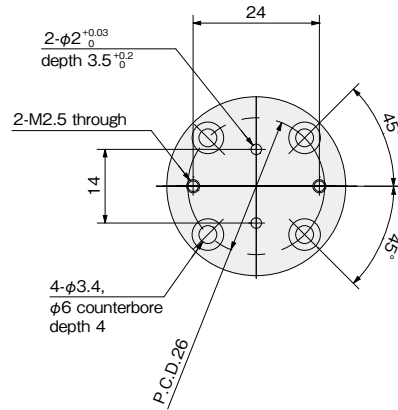
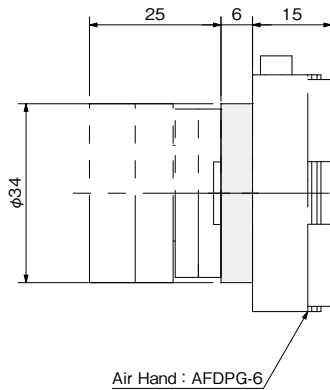
The below table shows target air hands of the adapter

Size	Type	— A	— N
34		For AFDPG-6	For NHBPG-10
54		For AFDPG-8	For NHBPG-16
70		For AFDPG-14	For NHBPG-20

## Adapter for Compliance Light For CPLHB34

### ● Dimension when Compliance Light and adapter for air hand is combined.

#### CPLHB34F(S) + HA-CPLHB34-A



#### Attached parts

Parallel pin: A type 2x5 2pcs

Parallel pin: A type 3x6 1pcs

Hexagon socket head bolt: M2.5x0.45 stem length 12 2pcs

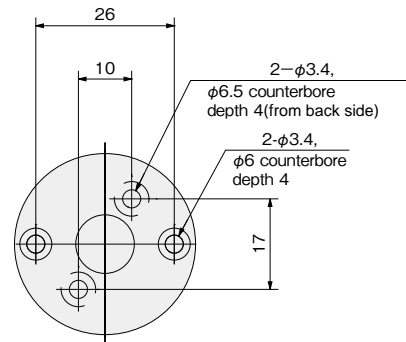
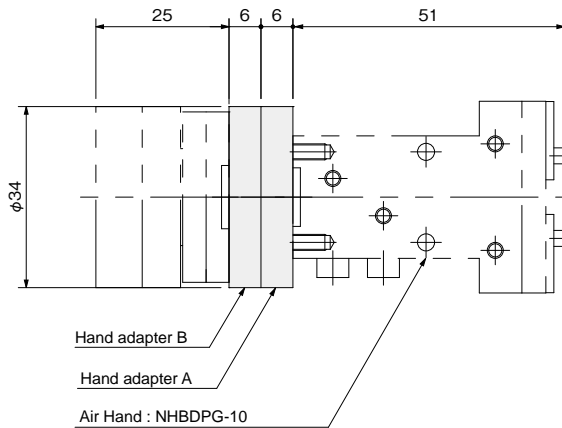
Hexagon socket head bolt: M3x0.5 stem length 6 4pcs

#### Note: Material is as below

Adapter A, adapter B for Air Hand: Aluminum alloy (anodized)

Attached parts listed above: Stainless steel

#### CPLHB34F(S) + HA-CPLHB34-N



#### Attached parts

Parallel pin: A type 3x6 2pcs

Hexagon socket head bolt: M3x0.5 stem length 6 8pcs

#### Note: Material is as below

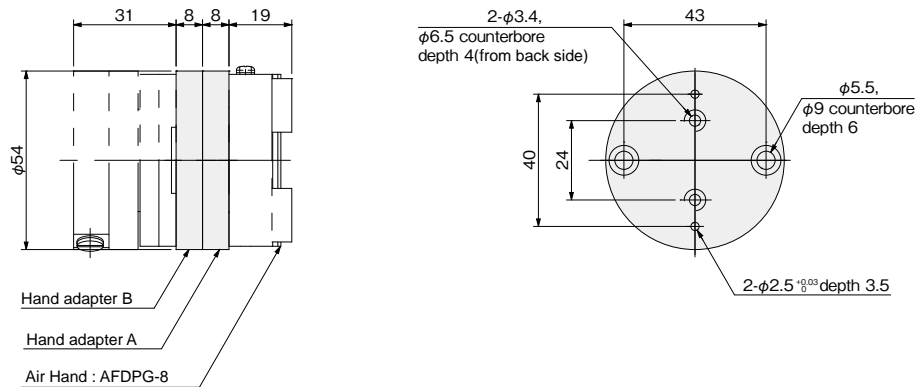
Adapter A, adapter B for Air Hand: Aluminum alloy (anodized)

Attached parts listed above: Stainless steel

## Adapter for Compliance Light For CPLHB54

### ● Dimension when Compliance Light and adapter for air hand is combined.

#### CPLHB54F(S) + HA-CPLHB54-A



#### Attached parts

Parallel pin: B type 2.5×6 2pcs

Parallel pin: A type 4×8 2pcs

Hexagon socket head bolt: M3×0.5 stem length 8 2pcs

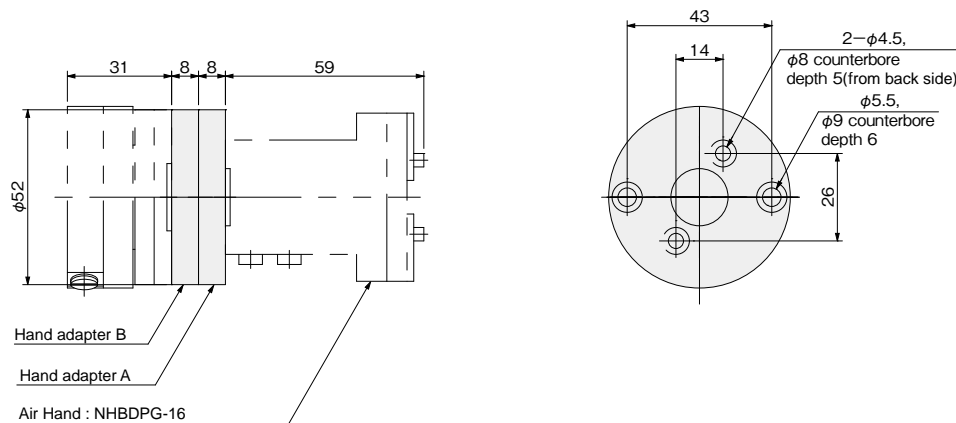
Hexagon socket head bolt: M5×0.8 stem length 8 6pcs

#### Note: Material is as below

Adapter A, adapter B for Air Hand: Aluminum alloy (anodized)

Attached parts listed above: Stainless steel

#### CPLHB54F(S) + HA-CPLHB54-N



#### Attached parts

Parallel pin: A type 4×8 2pcs

Hexagon socket head bolt: M4×0.7 stem length 8 2pcs

Hexagon socket head bolt: M5×0.8 stem length 8 6pcs

#### Note: Material is as below

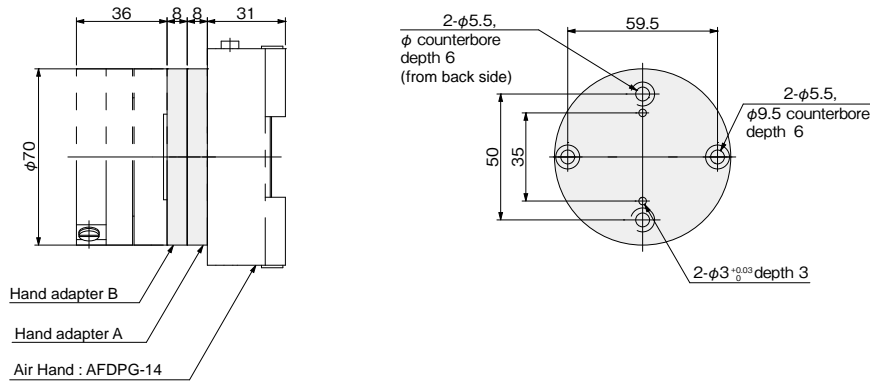
Adapter A, adapter B for Air Hand: Aluminum alloy (anodized)

Attached parts listed above: Stainless steel

## Adapter for Compliance Light For CPLHB70

### ● Dimension when Compliance Light and adapter for air hand is combined.

#### CPLHB70F(S) + HA-CPLHB70-A



#### Attached parts

Parallel pin: A type 3×6 2pcs

Parallel pin: A type 5×10 2pcs

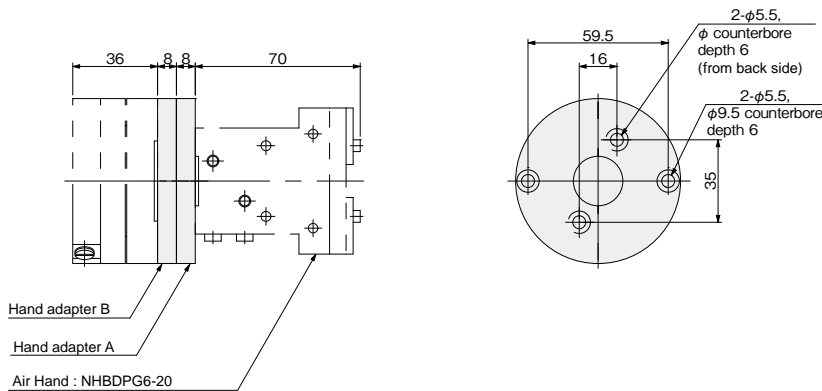
Hexagon socket head bolt: M5×0.8 stem length 8 8pcs

#### Note: Material is as below

Adapter A for Air Hand: Aluminum alloy (anodized)

Attached parts listed above: Stainless steel

#### CPLHB70F(S) + HA-CPLHB70-N



#### Attached parts

Parallel pin: A type 5×10 2pcs

Hexagon socket head bolt: M5×0.8 stem length 8 8pcs

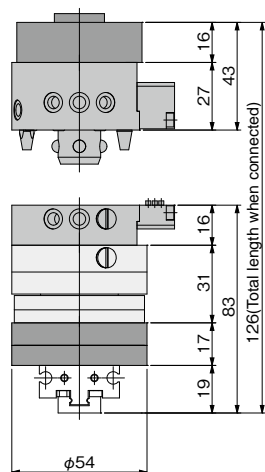
#### Note: Material is as below

Adapter A, adapter B for Air Hand: Aluminum alloy (anodized)

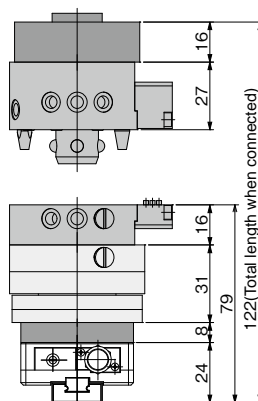
Attached parts listed above: Stainless steel

## Unit sample dimensions

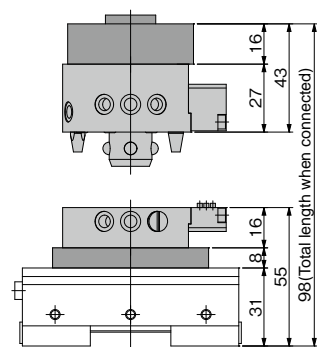
- Robot adapter (RA-MJB54-B)
- Auto Hand Changer (MJB54M-P、MJB54TC-P)
- Compliance Light (CPLHB54F)
- Adapter for Air Hand (HA-CPLHB54-A)
- Air Hand (AFDPG-8)



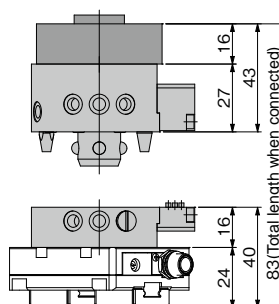
- Robot adapter (RA-MJB54-B)
- Auto Hand Changer (MJB54M-P、MJB54TC-P)
- Compliance Light (CPLHB54F)
- Adapter for Air Hand (EW2A-H18)
- Flat Type Electric Hand (EW2H18)



- Robot adapter (RA-MJB54-B)
- Auto Hand Changer (MJB54M-P、MJB54T-P)
- Adapter for Air Hand (HA-MJB54-A)
- Air Hand (AFDPG-14)



- Robot adapter (RA-MJB54-B)
- Auto Hand Changer (MJB54M-P、MJB54T-P)
- Flat Type Electric Hand (EW2H18)



# Limited Warranty

KOGANEI CORP. warrants its products to be free from defects in material and workmanship subject to the following provisions.

**Warranty Period** The warranty period is 180 days from the date of delivery.

**Koganei Responsibility** If a defect in material or workmanship is found during the warranty period, KOGANEI CORP. will replace any part proved defective under normal use free of charge and will provide the service necessary to replace such a part.

**Limitations** ● This warranty is in lieu of all other warranties, expressed or implied, and is limited to the original cost of the product and shall not include any transportation fee, the cost of installation or any liability for direct, indirect or consequential damage or delay resulting from the defects.

● KOGANEI CORP. shall in no way be liable or responsible for injuries or damage to persons or property arising out of the use or operation of the manufacturer's product.

● This warranty shall be void if the engineered safety devices are removed, made inoperative or not periodically checked for proper functioning.

● Any operation beyond the rated capacity, any improper use or application, or any improper installation of the product, or any substitution upon it with parts not furnished or approved by KOGANEI CORP., shall void this warranty.

● This warranty covers only such items supplied by KOGANEI CORP. The products of other manufacturers are covered only by such warranties made by those original manufacturers, even though such items may have been included as the components.

The specifications are subject to change without notice.

URL <http://www.koganei.co.jp>

E-mail: [overseas@koganei.co.jp](mailto:overseas@koganei.co.jp)



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39300 Civic Center Dr., Suite 280, Fremont, CA 94538, U.S.A.  
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Rm. 2, 13F., No88, Sec. 2, Zhongxiao E. Rd., Zhongzheng Dist., Taipei City 100,  
Taiwan (ROC)  
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6F-601, Tower Bldg., 1005, Yeongde0-dong, Giheung-gu, Yongin-si, Gyeonggi-do,  
446-908, Korea  
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### KOGANEI (THAILAND) CO., LTD.

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### KOGANEI ASIA PTE. LTD.

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Tel: 65-6293-4512 Fax: 65-6293-4513