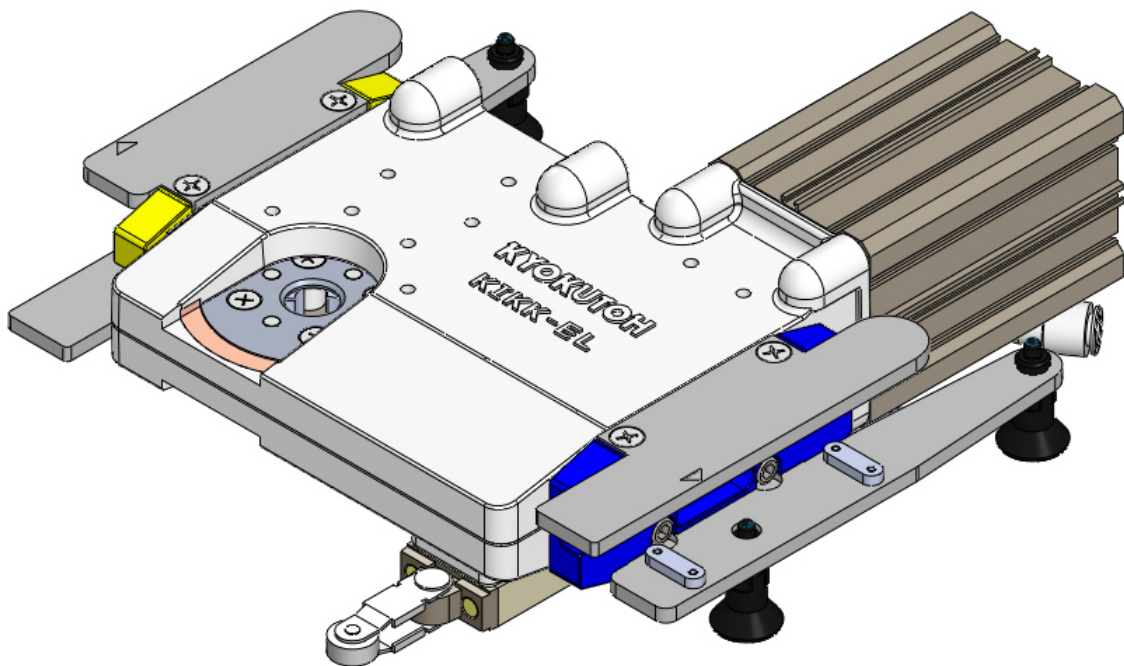


Tip Changer (KIKK-EL**S)

Instruction Manual

Please read this instruction manual carefully
before operating this unit and use our product correctly.
After reading this instruction manual, be sure to keep it in a place where a person
who uses or manages the equipment can check it at any time.



REVISION

Revision history

Version	Date	Contents
First edition	20.11.2018	First edition issue
Revised edition	05.03.2019	Change Contacts page Change of address in China
Revised edition	May.2019	Format change
Revised edition	26.11.2019	Change of External Dimension Diagram
Revised edition	12.12.2019	Change of Use condition with STC
Revised edition	17.02.2020	Change of How to install
Revised edition	02.04.2020	Change of How to install
Revised edition	03.04.2020	Change of Maintenance
Revised edition	26.10.2020	Change of Maintenance
Revised edition	09.12.2020	Change of Option List
Revised edition	28.09.2021	Change of Parts Name (STC Parts)
Revised edition	23.09.2022	Change of Parts Model Name (Adapter Block)
Revised edition	22.02.2023	Correction of Required Number of Nails
Revised edition	28.09.2023	Correction of Preparation
Revised edition	14.12.2023	Correction of Robot Teaching
Revised edition	02.04.2024	Correction of Mounting hole dimensions

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1. Safety Precautions

■ Introduction



This Tip Changer, KIKK-EL**S series is designed to exchange damaged electrodes (hereinafter called cap tips) for new tips in car production line. Please do not use for any purpose other than described in this manual. We are not be able to take a responsibility for any damage or injury caused by results other than specified in this manual.

After reading, please the manual to the place
where you can check the manual.

■ Regarding Signs

 Warning	It indicates contents informing possibilities of death or serious injury in case of incorrect handling.
 Caution	It indicates contents informing possibilities of injury due to handling error or occurrence of material damages.
	This symbol indicates operations that should not be done.
	This symbol indicates operation that should be done.

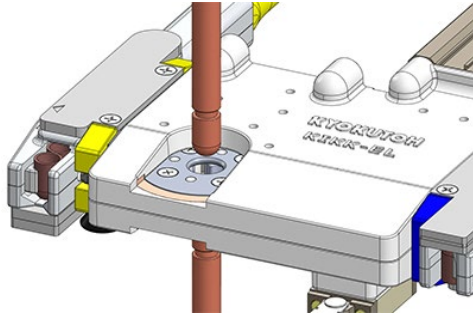
■ Handling precautions

	<ul style="list-style-type: none">• Never disassemble or modify. →It may cause injury or operation failure.• Do not put this unit in liquid or spill too much liquid (over 70 ml/min, longer than 10 min) such as water. →This could result in malfunction.• Do not insert any thing other than the welding tip to the rotating part. →Can be a cause of malfunction and injury.• Do not rotate in a way that is not described. →Can be a cause of damage and injury.• Be sure to protect air pipe from any kinds of damages. →Damaged pipe could result in malfunction.• Keep hands away from opening part during operation. →May be a cause of injury.• Do not insert metallic articles such as a pins or needles in rotating part or opening part during operation. →This could result in operation malfunction or electrical shock.• Do not tilt this machine more than 45 degree when installing or operating. →This could result in operation malfunction and injury.• Please do not use chlorine-based or acidic cleaner for cleaning the main body. →Toxic gas generated from the cleaner may harm your health.• Do not put undersigned tips in cartridge. →Incorrect tips type will cause malfunction and damage.• Stop air supply before "exchange cylinder, spring or nails" or "remove unit" or "robot teaching". →This could result in serious injury.
	<ul style="list-style-type: none">• Firmly fix this unit to stand. →Unstable installation causes imbalance tip setting or accident.• Remove alcohol or thinner properly after maintenance. →The flying sparks can cause fires or explosions.• Protect air pipe from spatter. →The flying spatter causes air leak due to melting pipe.• Remove spatter which covers tip remover periodically. →Spatter build-up can cause operation malfunction.

2. Preparation

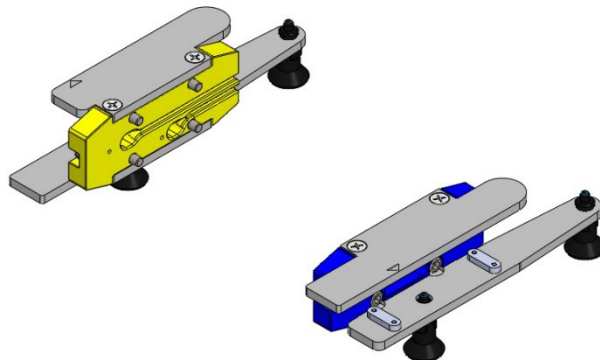
■Attention

1) This product is used when mounting and removing cap tip with robot gun.



2) Upper and lower adapter blocks can be distinguished by color. Generally, "yellow is for the upper side" and "blue for the lower side".

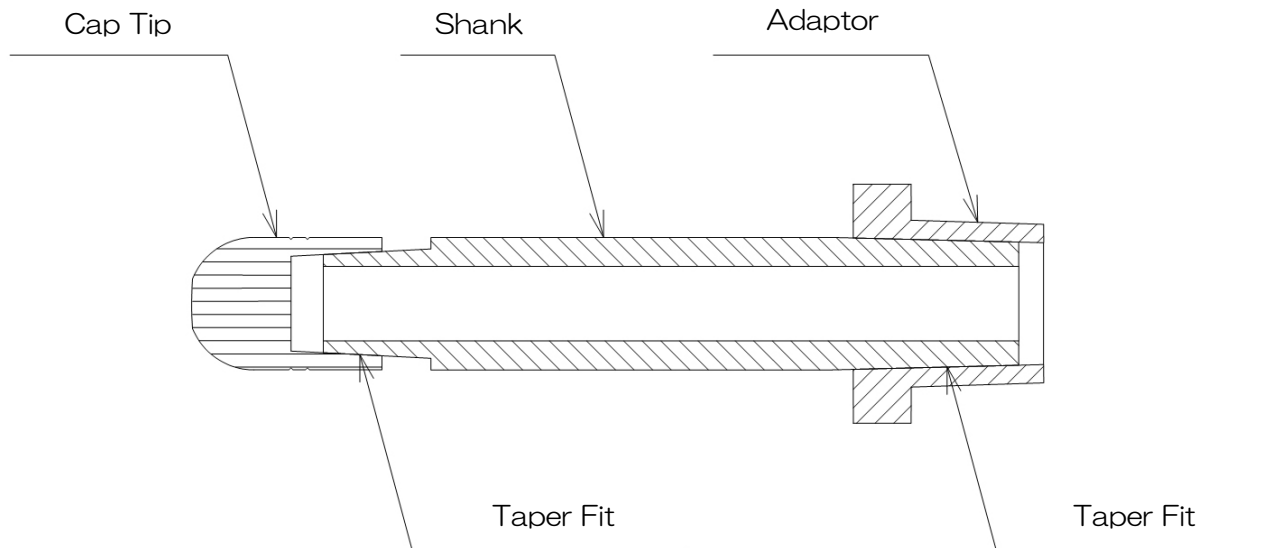
For Upper side
adapter block



For Lower side
adapter block

■Mandatory fixing for a shank and an adaptor

Make sure a shank and an adaptor are fixed well before removing a cap to achieve a proper cap removing.



If it is hard to fix, take off an adaptor and a shank and hit the shank in to the adaptor with paying attention not to hurt the taper then restore it on a gun.

If a taper on the shank or the adaptor is worn out or damaged, it is required to replace the shank or the adaptor.

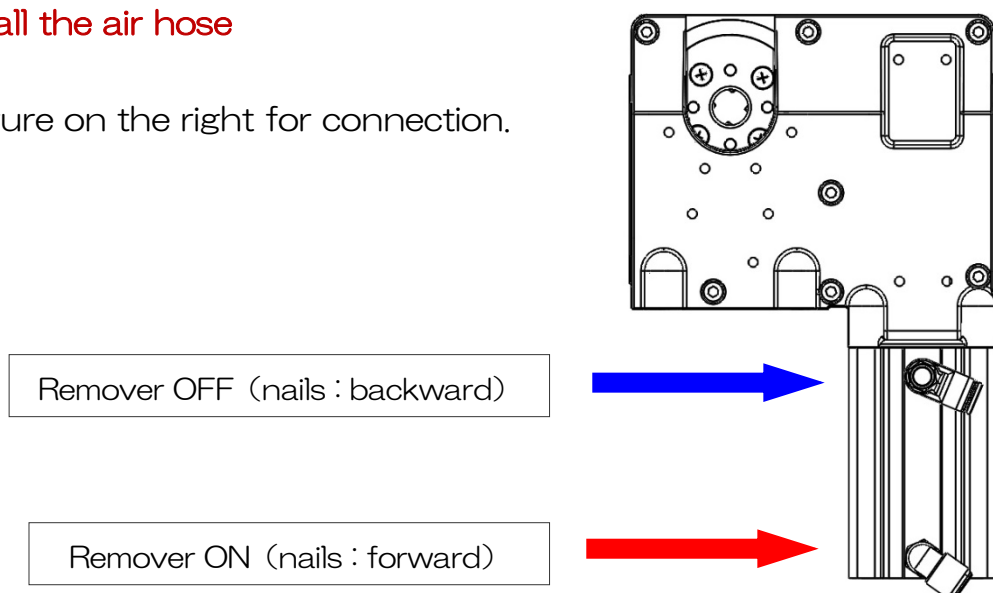
It may cause a tip remove failure if a process above is not completed properly.

■ How to install

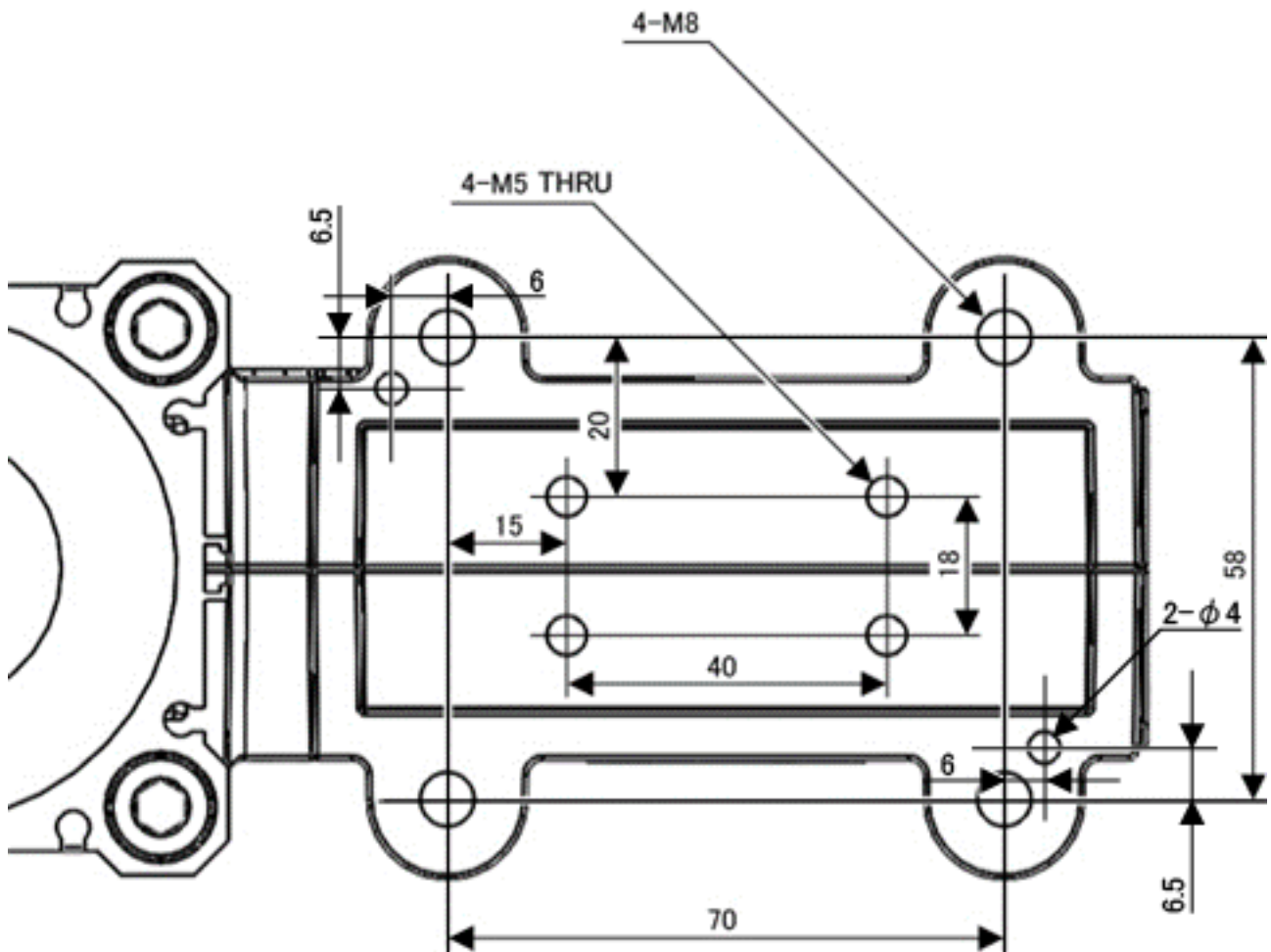
1. Install this machine in the area where welding robot can reach.
(Please refer to the following drawing for the dimension of the installation plate.)
2. Firmly fix tip changer with four M8 cap bolts.
(The stand must be solid and fixed.)
3. Set the air filter to the air supply circuit.
4. Connect air cylinder to air hose, and place the spatter collecting case ahead.
(Hose and hose band can be included as options.)
5. Required Air Pressure more than 0.5 MPa.
6. Installation place must be where spatter and cooling water do not directly fall down as much as possible.
7. Remove dust or foreign substances from the body when they are caught in the body. When cleaning inside, please disassemble.
8. Please make sure that the cartridge is securely fastened before use. Also, make sure that the cartridge model being used is correct.
9. Please make sure that the cap tip is loaded in the cartridge, or the cap tip is used correctly.
10. During operation, set the applied gun pressure within 120kgf-150kgf.
※If 150kgf or more is used, the product may be damaged.
※If 120kgf or less is used, the tip may not be set on a shank.

■ How to install the air hose

Refer to the figure on the right for connection.



■ Mounting hole dimensions



■ Specification

Model	KIKK-EL**S
Outer dimension (without STC)	281W × 296D × 97H
Air pressure	0.5 (MPa) ~
Weight (without STC)	About 6.0 (kg)
Reference Weight (with STC)	About 7.0 (kg)
Mounting hole	H70 × V58 (M8 × 4)
Mounting area	H100 × V78 (mm)
Remover unit thickness & depth	T24 (mm) D49 (mm)
Cylinder model	CDQ2B-63-75DCM-M9BA
Thrust	About 1560 (N)

■Conditions for Spot Gun

1. For C gun

Conditions to use KIKK-ELS for C gun. (Straight x Straight)

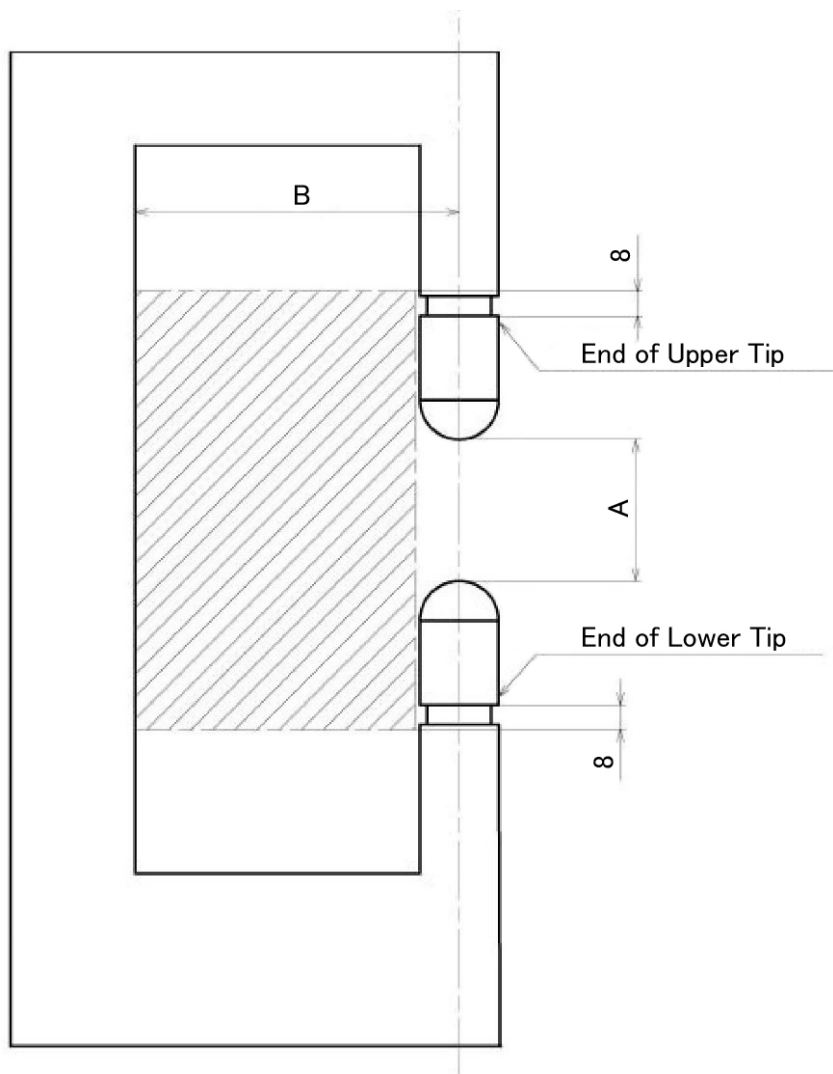
Dimension A should be

- To remove tip : 29mm or over
- To set tip : 45mm or over (for cartridge STC)

Dimension B should be

- To remove tip : 54mm or over
- To set tip : 25mm or over (for cartridge STC)

※Nothing should disturb in a shadow area in the figure above.



2. For X gun

Conditions to use KIKK-ELS for C gun. (Straight x Straight)

Dimension A should be

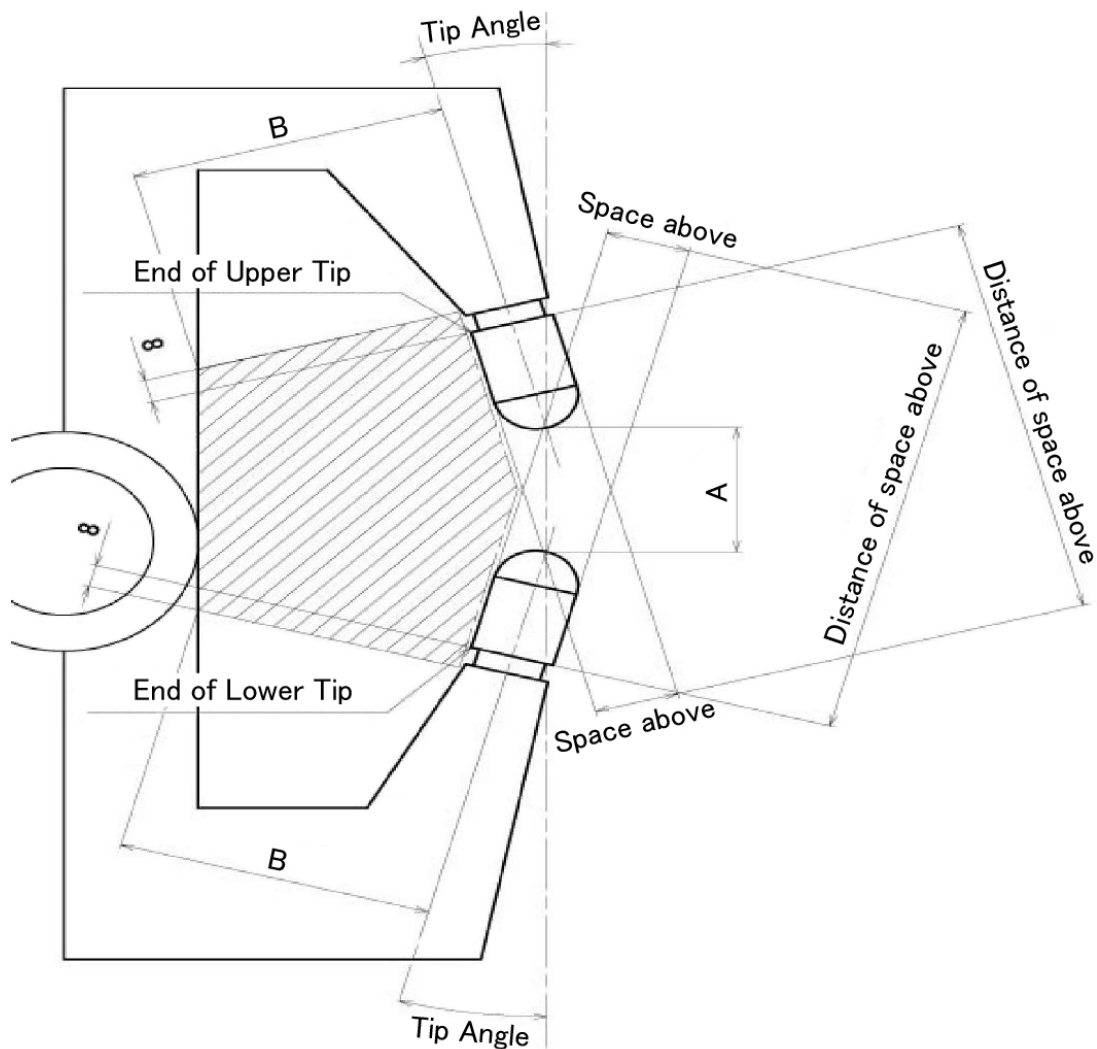
- To remove tip : 29mm or over
- To set tip : 45mm or over (for cartridge STC)

Dimension B should be

- To remove tip : 54mm or over
- To set tip : 25mm or over (for cartridge STC)

Tip angle should be less than 15 degrees.

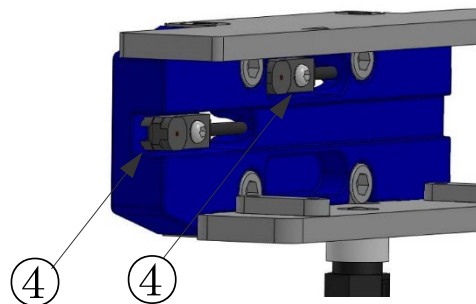
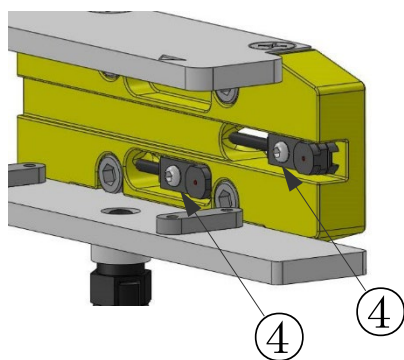
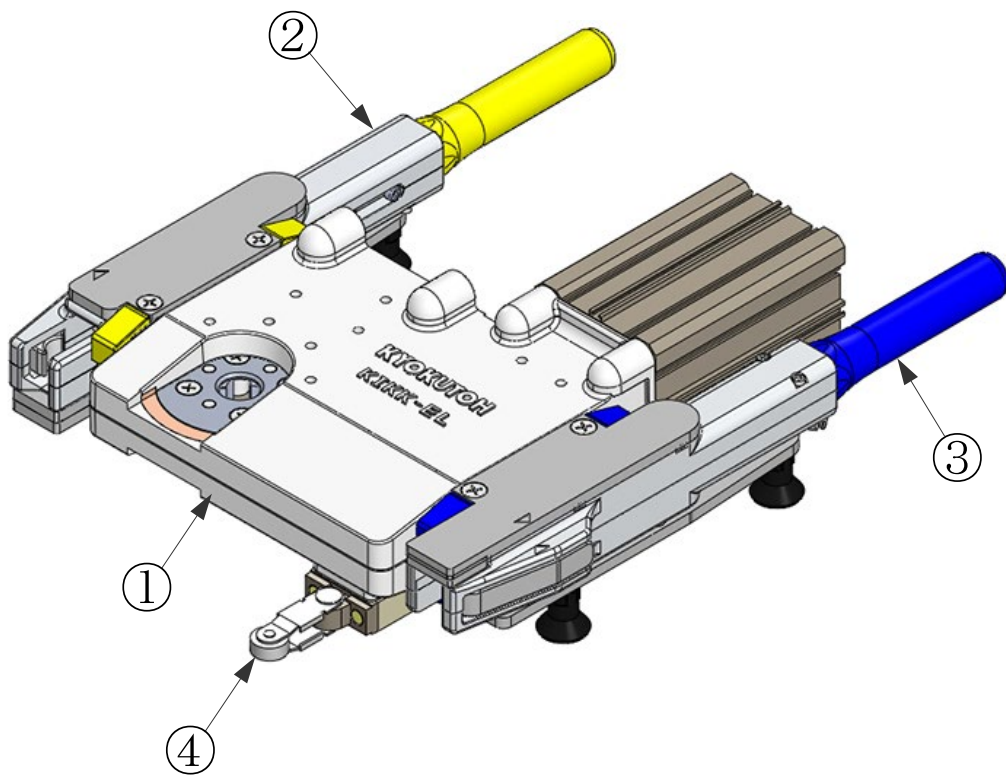
※Nothing should disturb in a shadow area in the figure above.



3. Name of Each Part

■ Name list

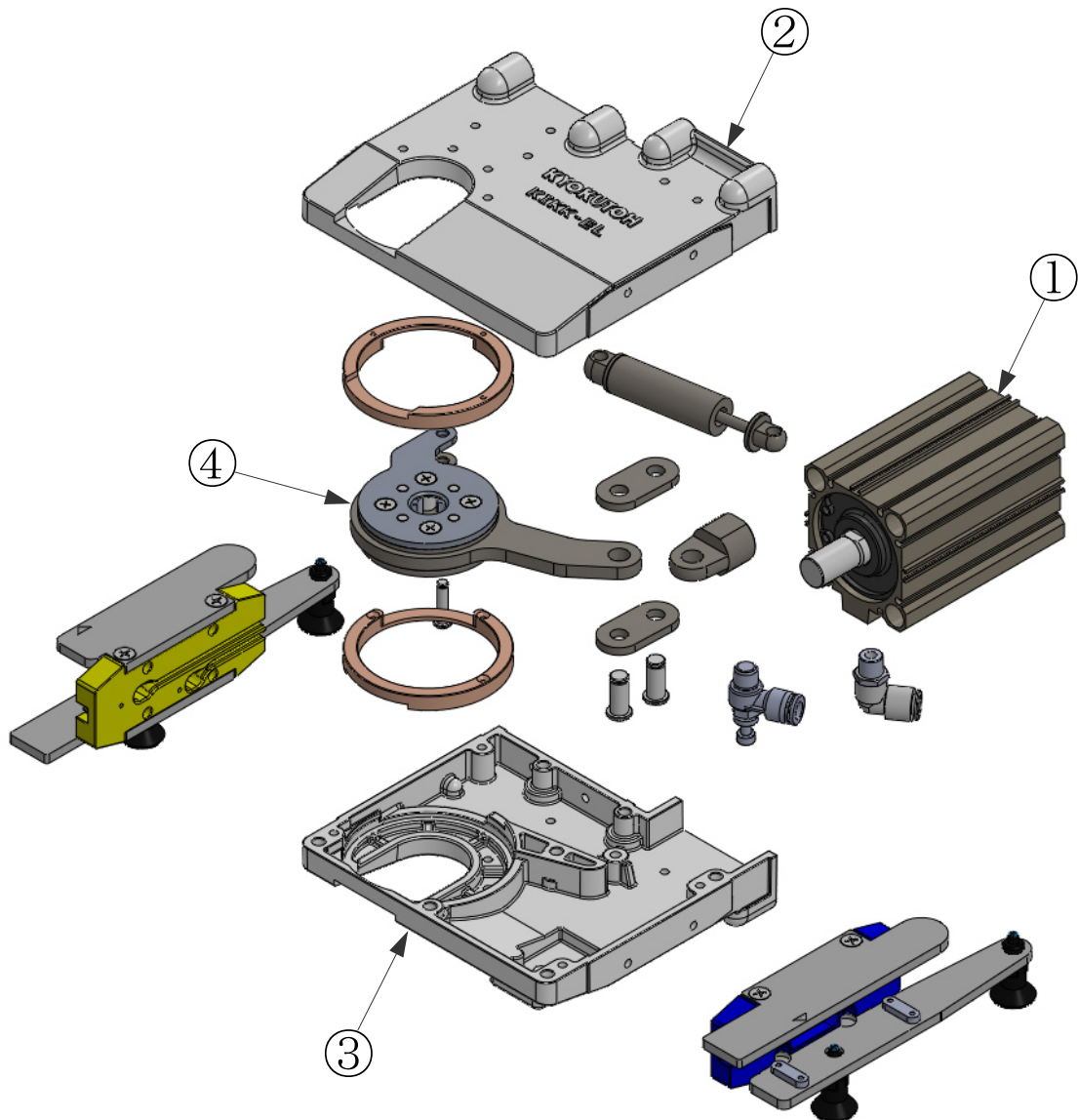
No.	Name	Model	QTY
1	KIKK-EL**S Body	KIKK-EL**S	1
2	Upper side Cartridge <i>(Refer to the manual of STC)</i>	STC-****U <i>(Refer to the manual of STC)</i>	1
3	Lower side Cartridge <i>(Refer to the manual of STC)</i>	STC-****L <i>(Refer to the manual of STC)</i>	1
4	Sensor Pac (Option)	KIKK-ELS-SE-Pac-NPN or PNP	1



4. Bill of Materials

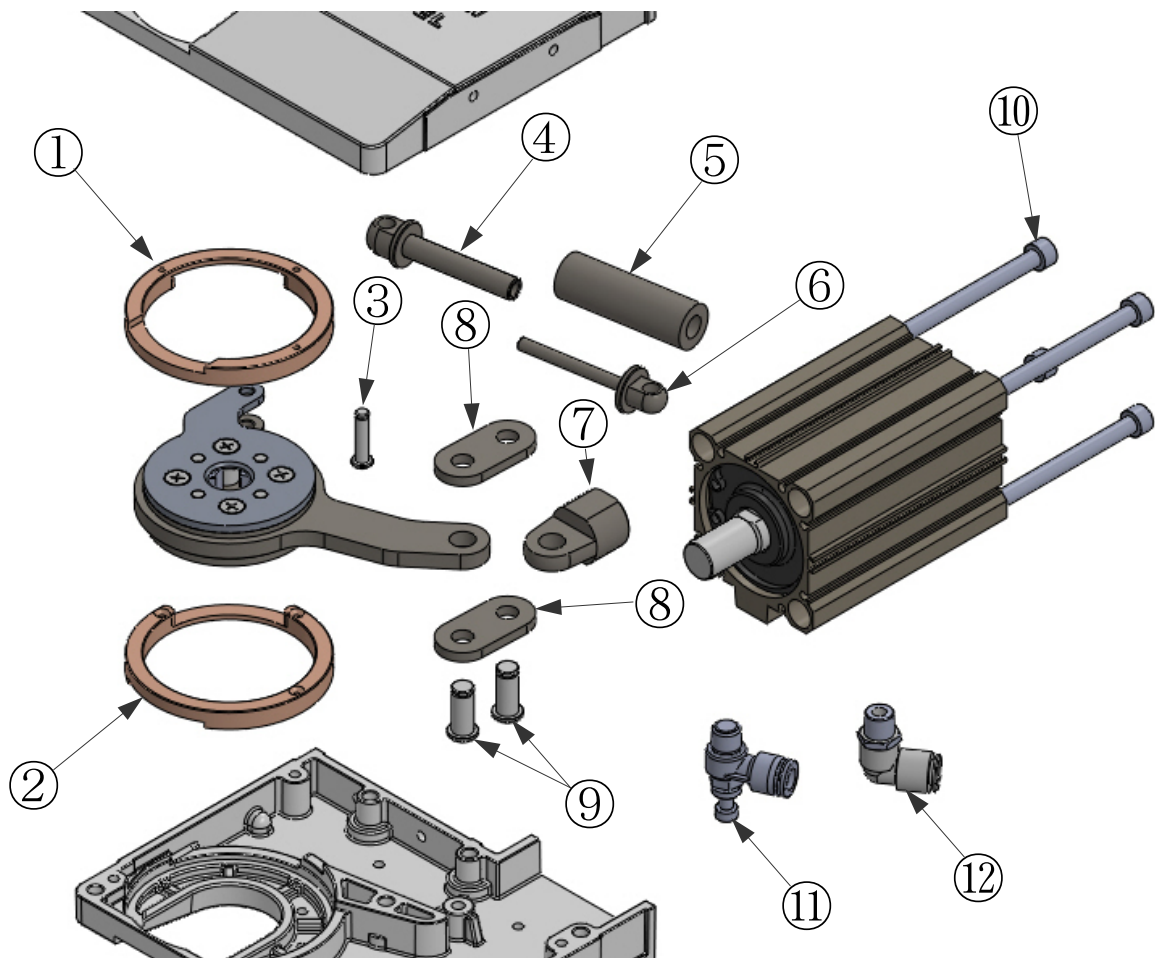
■KIKK-EL**S Appearance

No.	Name	Model	QTY
1	Cylinder	CDQ2B-63-75DCMZ-M9BA	1
2	Upper body	KIKK-EL20-P-013-DC	1
3	Lower body	KIKK-EL20-P-014-DC	1
4	Remover unit	KIKK-EL-ReU-TYPE-13(for $\phi 13$)	1
		KIKK-EL-ReU-TYPE-16(for $\phi 16$)	1
		KIKK-EL-ReU-TYPE-19(for $\phi 19$)	1
		KIKK-EL-ReU-TYPE-20(for $\phi 20$)	1



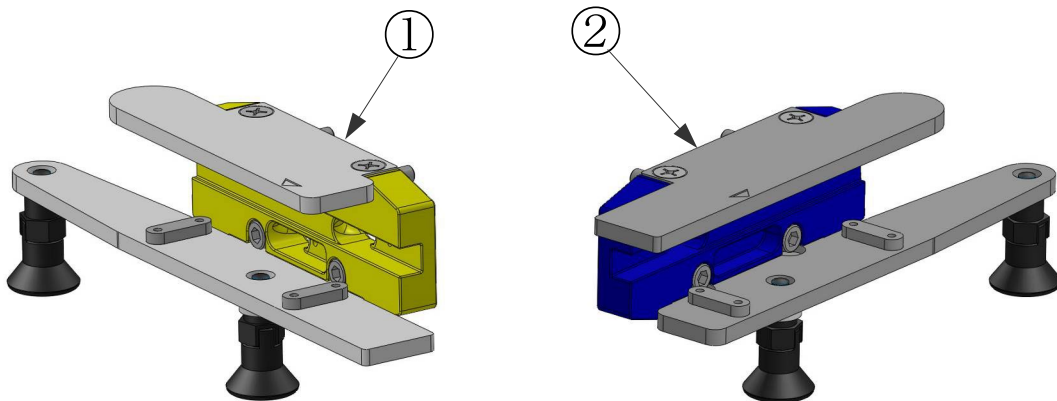
■KIKK-EL**S Internal

No.	Name	Model	QTY
1	Upper bush	KIKK-EL20-P-006U	1
2	Lower bush	KIKK-EL20-P-006L	1
3	Remove shaft 3	KIKK-EL20-P-009	1
4	Spring guide A	KIKK-EL20-P-007	1
5	Spring	51-22100	1
6	Spring guide B	KIKK-EL20-P-008	1
7	Knuckle joint	KIKK-EL20-P-012	1
8	Arm ring plate	KIKK-EL20-P-011	2
9	Remove shaft 4	KIKK-EL20-P-010	1
10	Cylinder fixing bolt	CQ2B-M8*125L	4
11	Speed controller	AS2201F-02-10SA	1
12	Tubing	KQ2L10-02AS	1



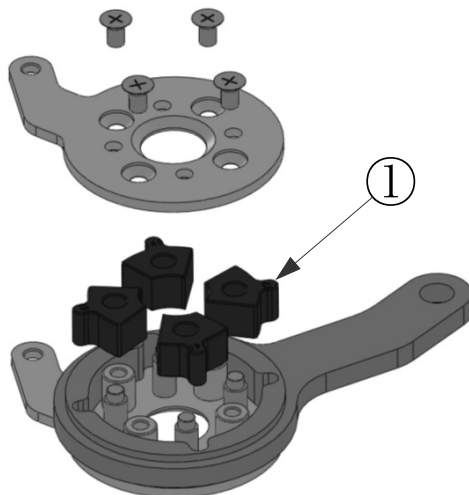
■ Adapter block

No.	Name	Model	QTY
1	Upper side adapter block	STC-ADB-13U-SET (for ϕ 13)	1
		STC-ADB-16U-SET (for ϕ 16)	1
		STC-ADB-19U-SET (for ϕ 19)	1
		STC-ADB-20U-SET (for ϕ 20)	1
2	Lower side adapter block	STC-ADB-13L-SET (for ϕ 13)	1
		STC-ADB-16L-SET (for ϕ 16)	1
		STC-ADB-19L-SET (for ϕ 19)	1
		STC-ADB-20L-SET (for ϕ 20)	1

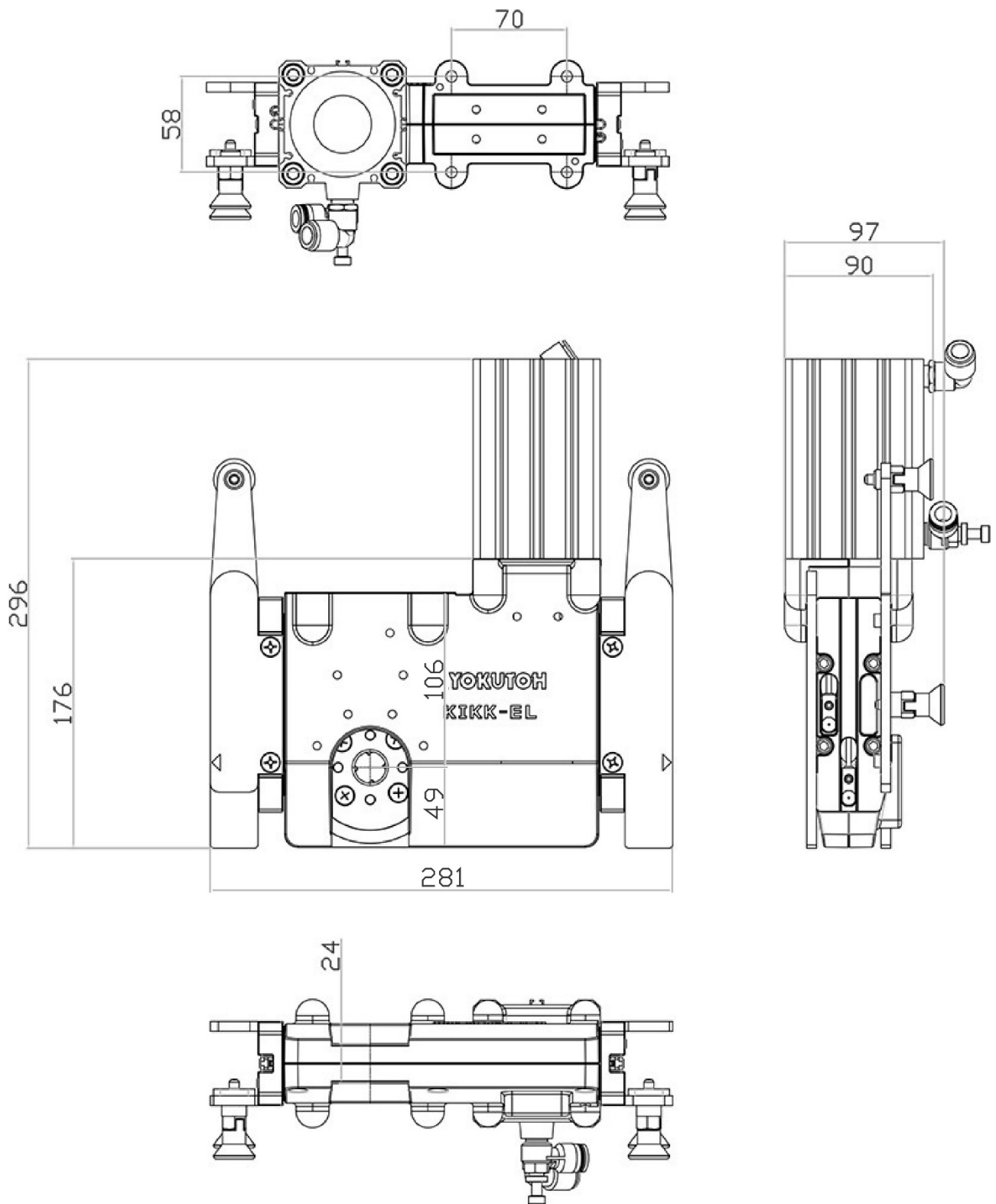


■ Remover unit

No.	Name	Model	QTY
1	Nails	KIKK-EL13-P-001-13 (for ϕ 13)	1
		KIKK-EL16-P-001-16 (for ϕ 16)	1
		KIKK-EL19-P-001-19 (for ϕ 19)	1
		KIKK-EL20-P-001-20 (for ϕ 20)	1



5. External Dimension Diagram



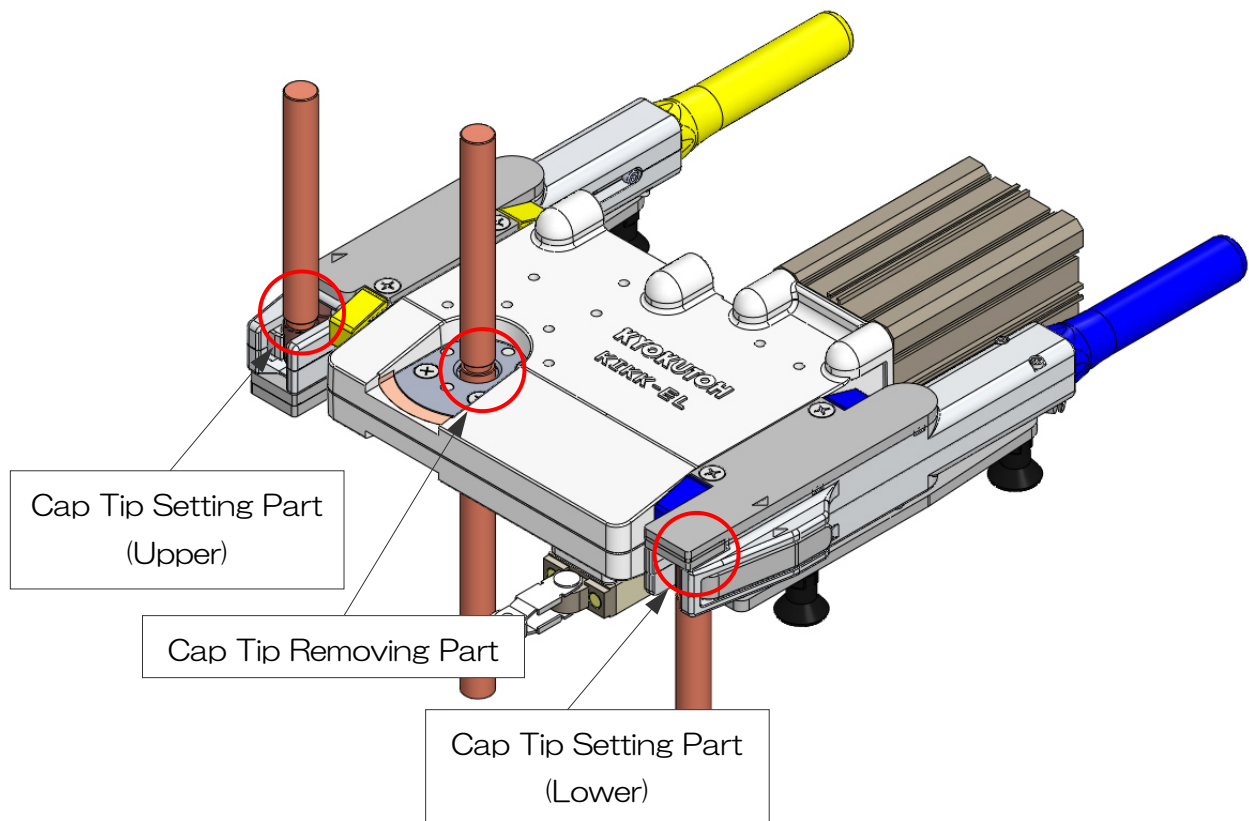
6. Example of Operation

■Cautions and preparation before operating

- Make sure that the machine is fixed on stand tightly.
- Confirm the shank is joined tightly to the gun arm. Please refer to 「P5. Mandatory fixing for a shank and an adaptor」
- Confirm the connection of the air supply.
- Check air cylinder operation and checking rotation movement.

※Test driving also possible.

■Tip position for setting and removing



■ Example of operation

※Please start from the welding power supply OFF/stopped cooling water.

※This is an example of operation when used with the switchboard of our company.

1) Start tip exchange • insertion operation



2) Confirm the presence of the upper and lower cartridges • the presence of the cap tip with "proximity sensor"

※The proximity sensor is assembled in the adapter block on Tip Changer



3) Move a lower side of robot gun to cap tip removal position.



4) Remove the lower side cap tip ※Be sure to remove the cap tip from the lower side



5) Check the removal of the lower side cap tip with "Limit Switch" or Proximity Sensor" on the Tip Changer



6) Move the lower side of the robot gun to cap tip insertion position.



7) Insert the lower side cap tip (Applied Pressure: 120-150kgf)



8) Move the robot gun back to pull out a cap tip (Speed: 200-300mm/sec)



9) Check the insertion of the lower side cap tip with "Limit Switch or Proximity Sensor" on the Tip Changer



10) Move the upper side of the robot gun to removal position.



11) Remove the upper side cap tip



12) Check the removal of the upper side cap tip with "Limit Switch or Proximity Sensor" on the Tip Changer.



13) Move the upper side of robot gun to removal position.



14) Insert the upper side cap tip (Applied Pressure: 120-150kgf)



15) Move the robot gun back to pull out a cap tip (Speed: 200-300mm/sec)



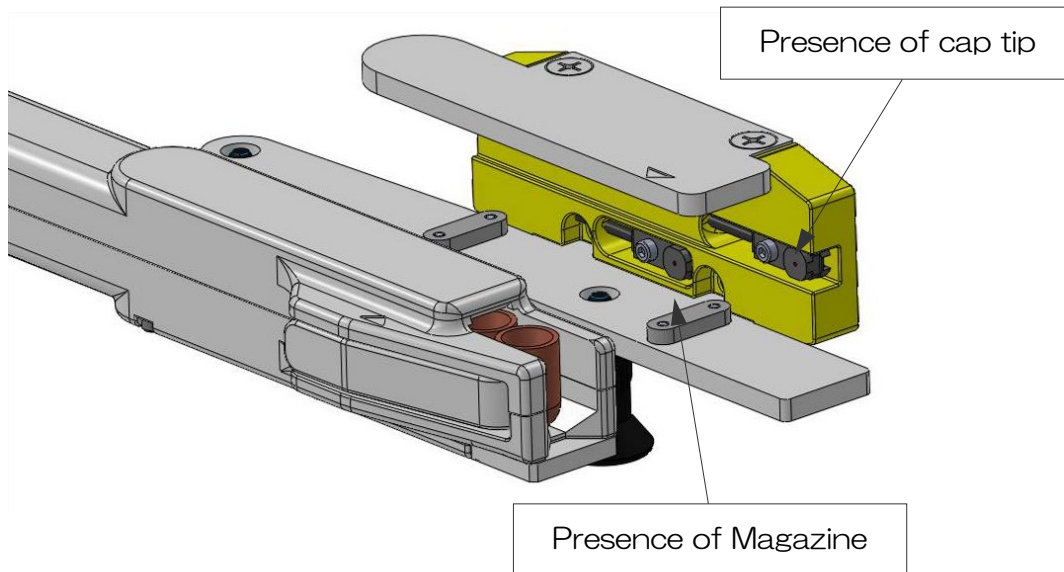
16) Check the insertion of the upper side cap tip with "Limit Switch or Proximity Sensor" on the
Tip Changer



17) Complete the cap tip exchange • insertion operation

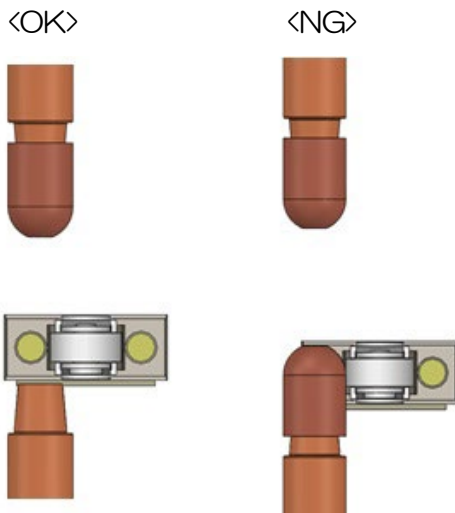
◆ Supplementary image

Check the presence of the cartridge and cap tips with "proximity sensor". This image is for the upper side(STC-****U), but it can also be applied for the lower side(STC-****L).



Check cap tip removal (LS)

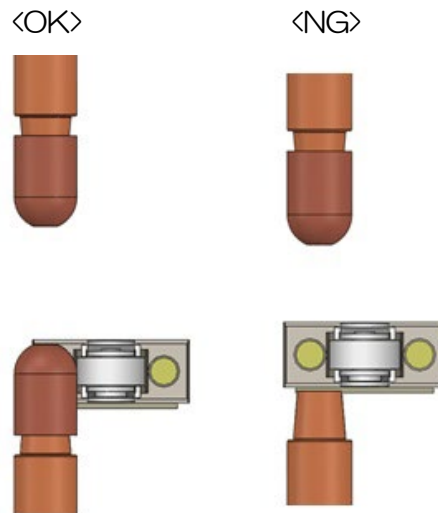
※ The image below shows an example of using the lower cap tip.



- ◆ For checking the cap tip removal, set as follows.
- If passing without contacting LS, OK
- If passing by hitting LS, NG

Check cap tip insertion (LS)

※ The image below shows an example of using the lower cap tip.



- ◆ For checking the cap tip removal, set as follows.
- If passing by hitting LS, OK
- If passing without contacting LS, NG

7. Robot Teaching

◆Items to be confirmed before robot teaching

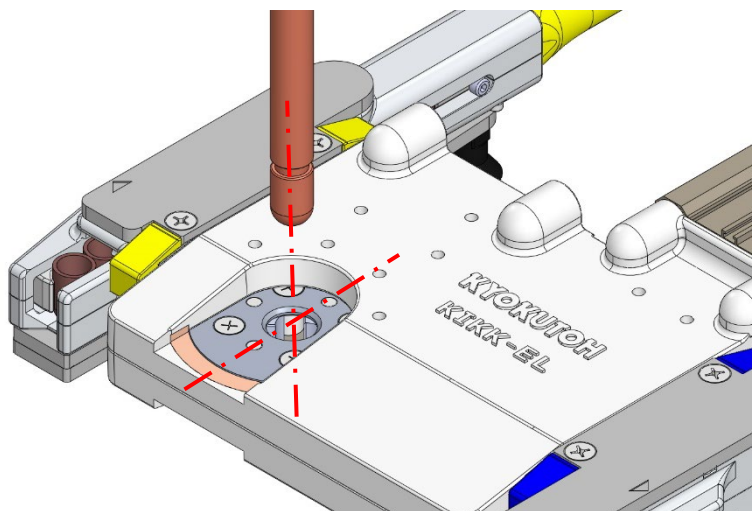
- Is the horizontal and the vertical of the robot gun correct?
- Are the shapes of the cartridge and cap tip appropriate?
- Is the tip loaded in the cartridge?
- Is the cartridge firmly fixed and does not move?
- Is the shank joined tightly to the gun arm?

※Please refer to 「P5. Mandatory fixing for a shank and an adaptor」 .

■Removing cap tip

※This operation is for the upper side, but it can also be applied for the lower side.

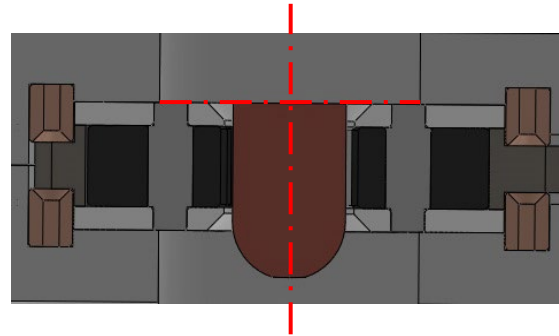
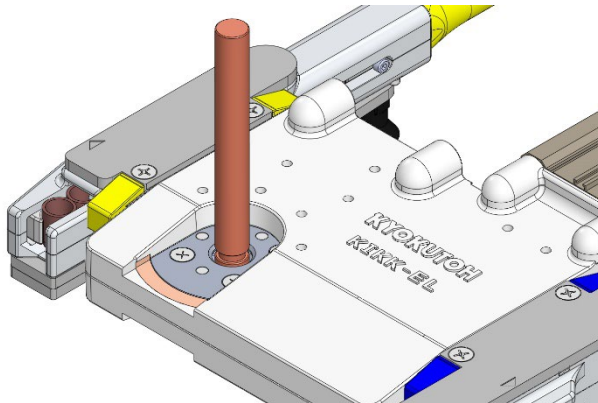
1) Position cap tips to the center of the remover unit by teaching robot.



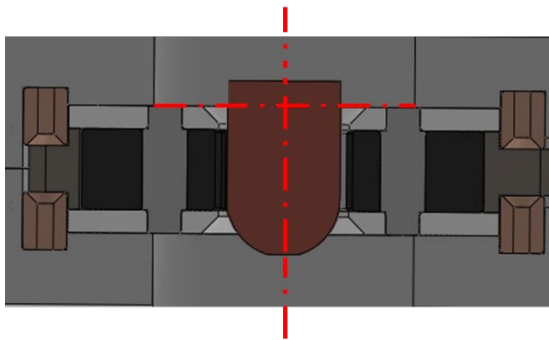
2) Confirm the center position of removing and move to the Z axial direction (up or down).

 Caution

※Be careful about collision.



※If the shank comes off, please correct the teaching so that it grasps the tip of the cap tip. (position is arbitrary)



3) Lift up 3 mm to Z axis direction in 0.7 sec after a cylinder start moving.

⚠ Caution

※Adjust cylinder speed. Adjust speed controller to keep 1.5 sec to 2 sec from forward end to back end on a cylinder.

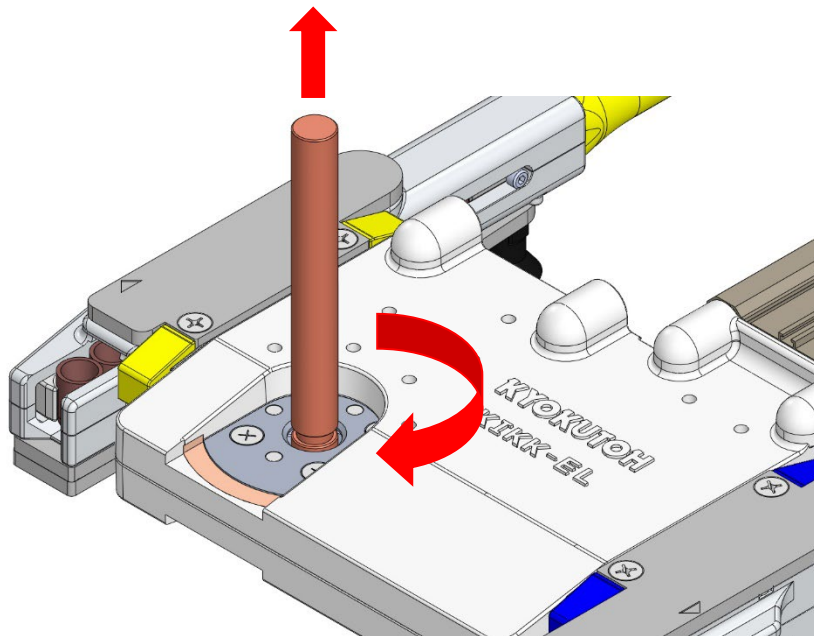
※Remover starts rotation in 0.7 sec. A robot has to be lifted up during the rotation.

※Please do the below action, since the cap tip cannot be removed by only the rotation of the remover. (Upper → Raise about 3mm, Lower → Lower about 3mm)

This action also prevents the robot gun and the KIKK from being damaged.

※The position of the cylinder switch needs to be re-adjusted when confirming the operation of the KIKK.

※Recommended lift up speed is about 100mm/sec.



4) After the robot has escaped and is not close to KIKK-EL**S, return the cylinder and release the tip.

⚠ Caution

※If the cap tip is released with the robot being close to KIKK-EL**S, the tip may hit the parts such as gun arm and scatter in an unexpected area.

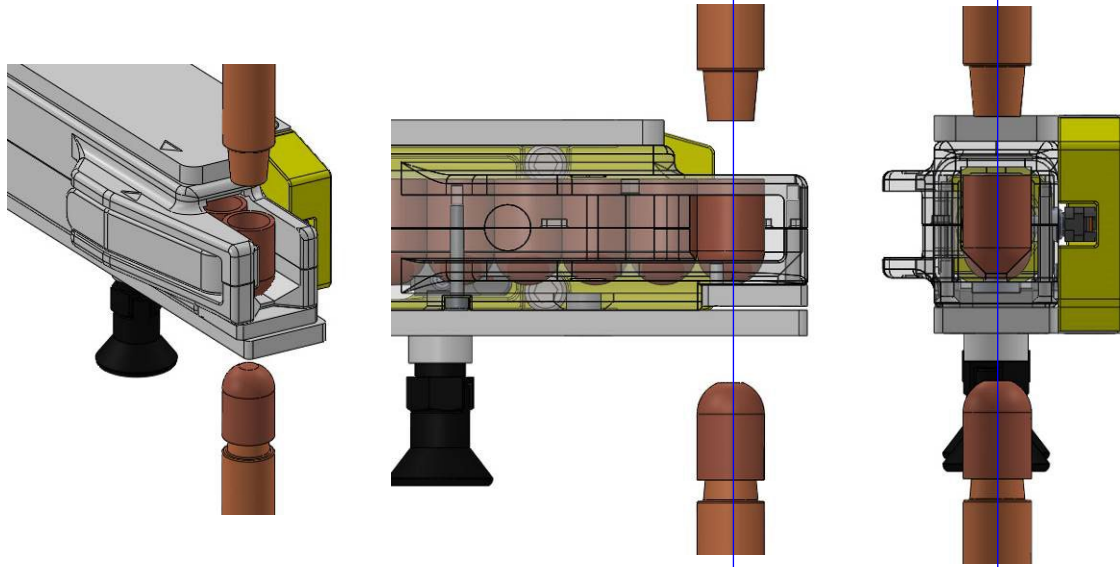
5) Check the cap tip fell off.

■ Inserting upper side tip

1) Move the robot gun from the front of the cartridge to the position where the cap tip is inserted.

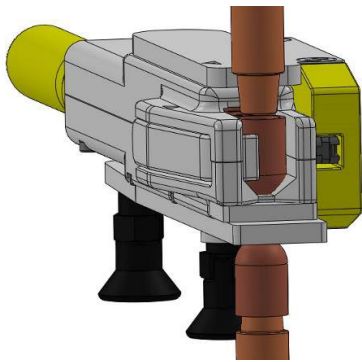
※Fit as much as possible to the center position of the loaded cap tip and the shank.

If each center position is out of position, the insertion operation may fail.



2) The lower side moves to the position where the front end of the cap tip contacts the pressure plate. Push up from the contact within 1 mm.

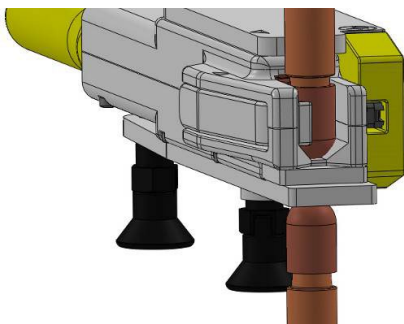
※Operation of pushing up too much will cause failure of tip insertion or product breakage. The upper side moves to the pressure position.



3) Insert the cap tip by applying pressure. (120kgf-150kgf recommended)

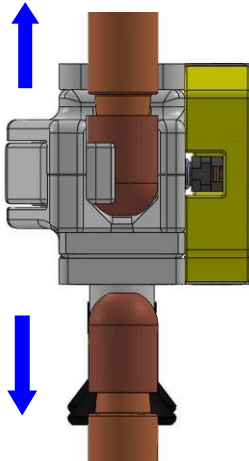
※If used at 150kgf or more, the product may be damaged.

※If used at 120kgf or less, the tip may not be inserted.



4) Make room at the front end of the cap tip by an interval of 1-2mm on the upper part. Move the lower part to a position where an interval of 1-5mm is opened at the pressure plate.

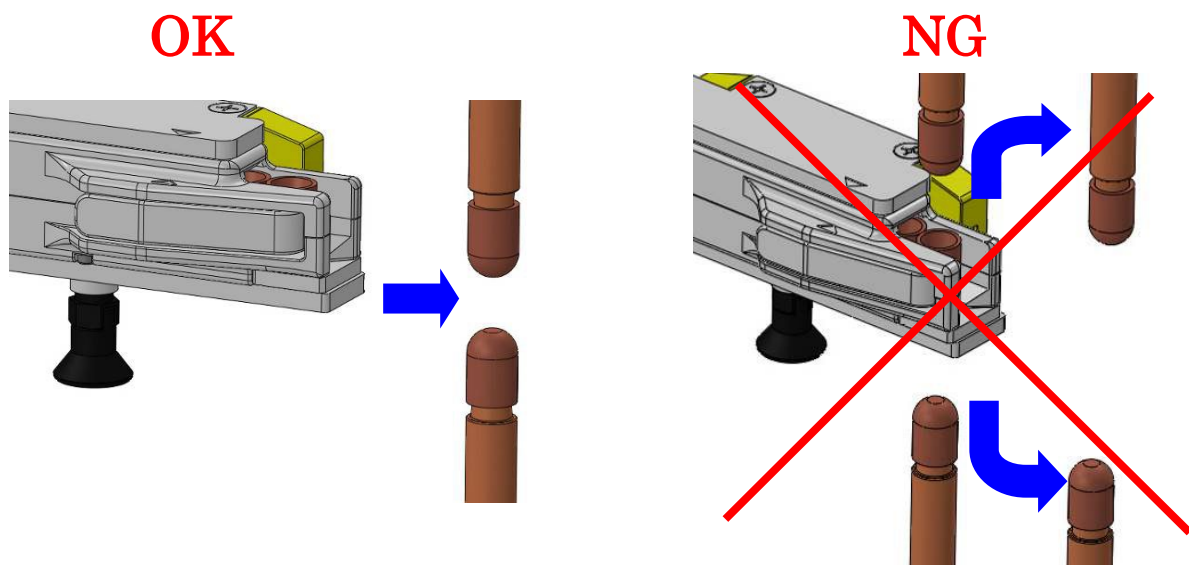
※When sending the robot to the rear without moving, there is a risk of scratches on the pressure plate • the front end of the cap tip.



5) Send the robot gun backward without opening the robot gun up and down. It is an important operation to insert the tip correctly. (speed:200-300mm/sec)

※The robot gun should not be sent backward after opening up and down. If sending back after opening up and down, cap tip insertion and cap tip removal cannot be performed correctly.

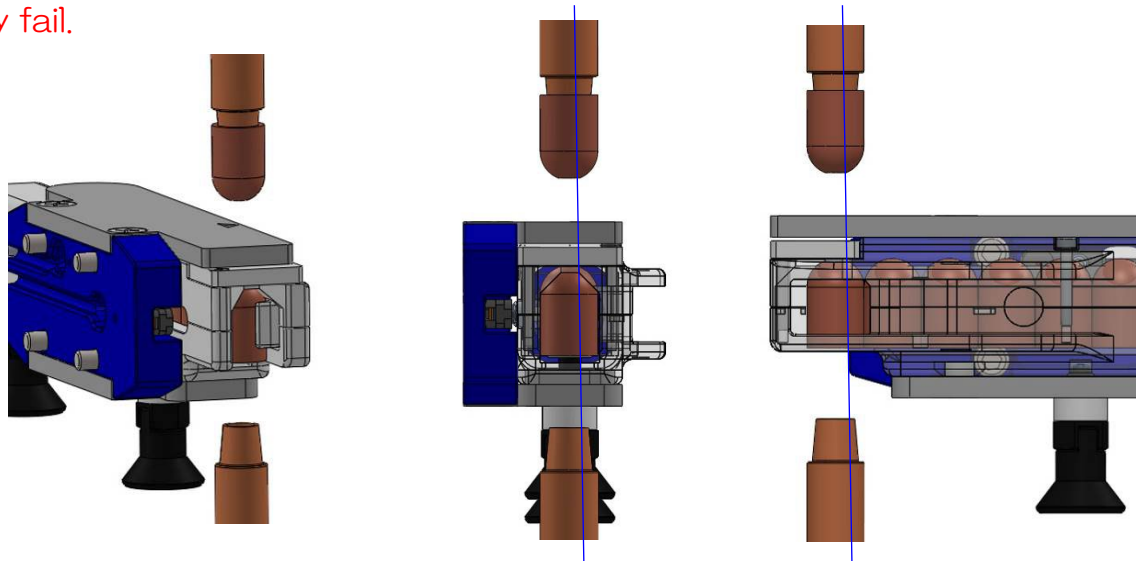
※Make sure that the next tip in the cartridge is forwarded correctly after sending backward.



■ Inserting lower side tip

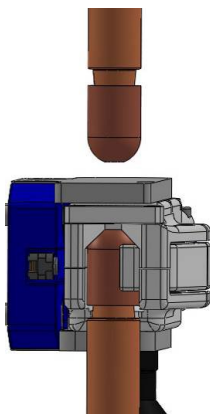
1) Move the robot gun from the front of the cartridge to the cap tip mounting position.

※Fit to the loading cap tip and the center position of shank as much as possible. If each center location is out of position, the insertion operation may fail.



2) Move the lower part to the position where it contacts the cap tip. Push up from the contact within 1 mm.

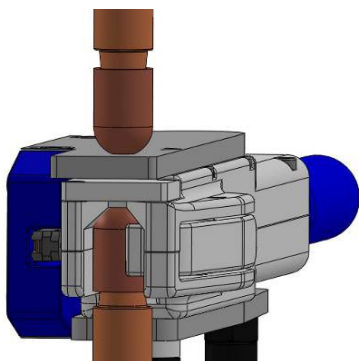
※Operation of pushing up too much will cause failure of cap tip insertion or product breakage. The upper side moves to the pressure position.



3) Insert the cap tip by applying pressure. (120kgf-150kgf recommended)

※If used at 150kgf or more, the product may be damaged.

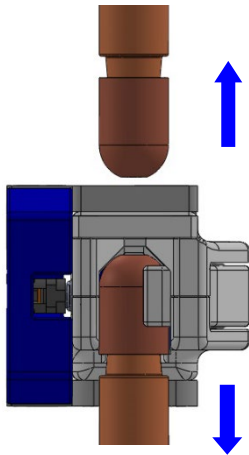
※If used at 120kgf or less, the tip may not be inserted.



4) In the upper part, make room at the front end of the cap tip by an interval of 1-5mm.

Move the lower part to a position spread by an interval of 1-2mm.

※When sending the robot to the rear without moving, there is a risk of scratches on the pressure plate • the front end of the cap tip.



5) Send the robot gun backward without opening up and down.

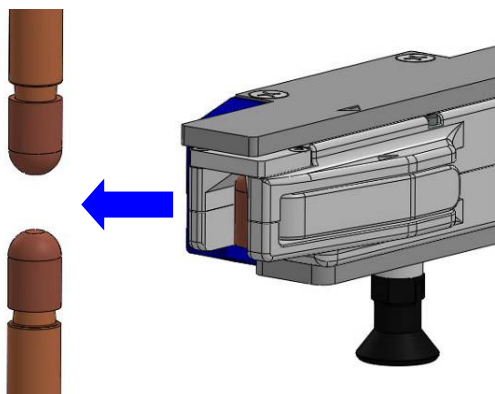
It is an important operation to insert the tip correctly. (Speed: 200-300mm/sec)

※The robot gun should not be sent backward after opening up and down.

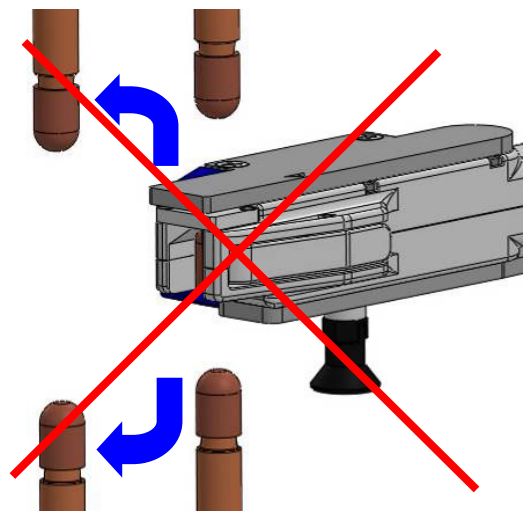
If sending back after opening up and down, cap tip insertion and cap tip removal cannot be performed correctly.

※Make sure that the next tip in the cartridge is forwarded correctly after sending backward.

OK



NG



8. Maintenance

◆Precautions before work

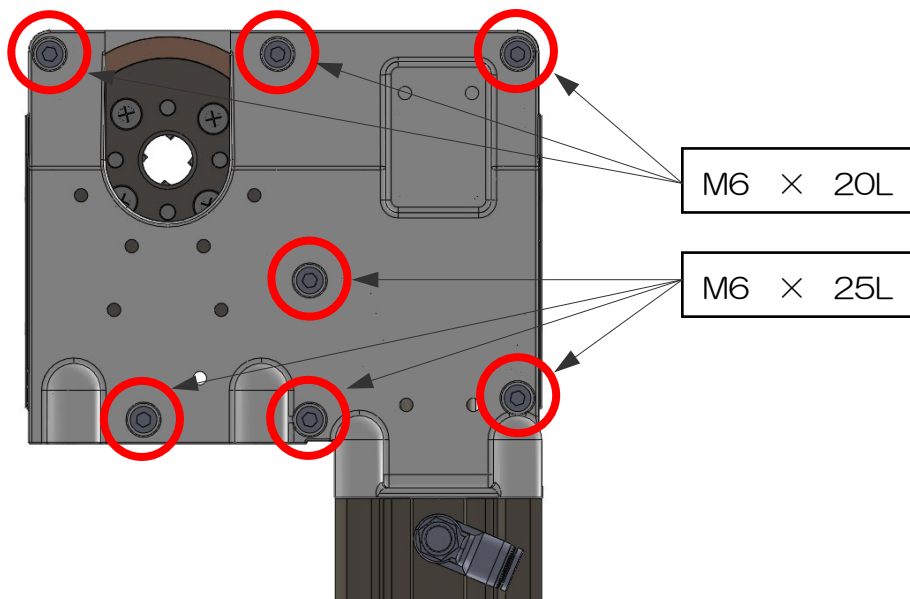
- Protect your body sufficiently with protective goggles, gloves, etc. before starting operation.
- Make sure that the machine is fixed on stand tightly.
- Confirm the connection of the air supply.
- Make sure that there are no foreign substances or dust accumulated in the cartridge.
- Unless otherwise specified 「Medium Strength Loctite」 is recommended as a slack preventing agent.

8-1. Procedure for changing remover unit

1) Cut off the air supply.

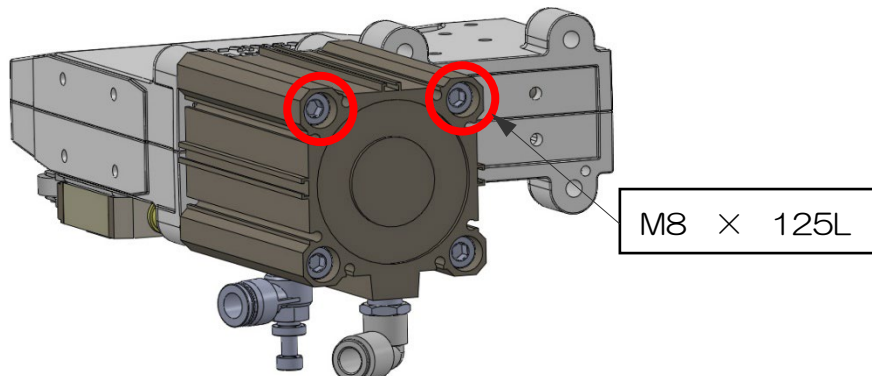
2) Remove the bolt referring to the figure below. (M6 x 7pcs)

※The screwing torque when assembling must be $7.6\text{N} \cdot \text{m}$ with loctite.

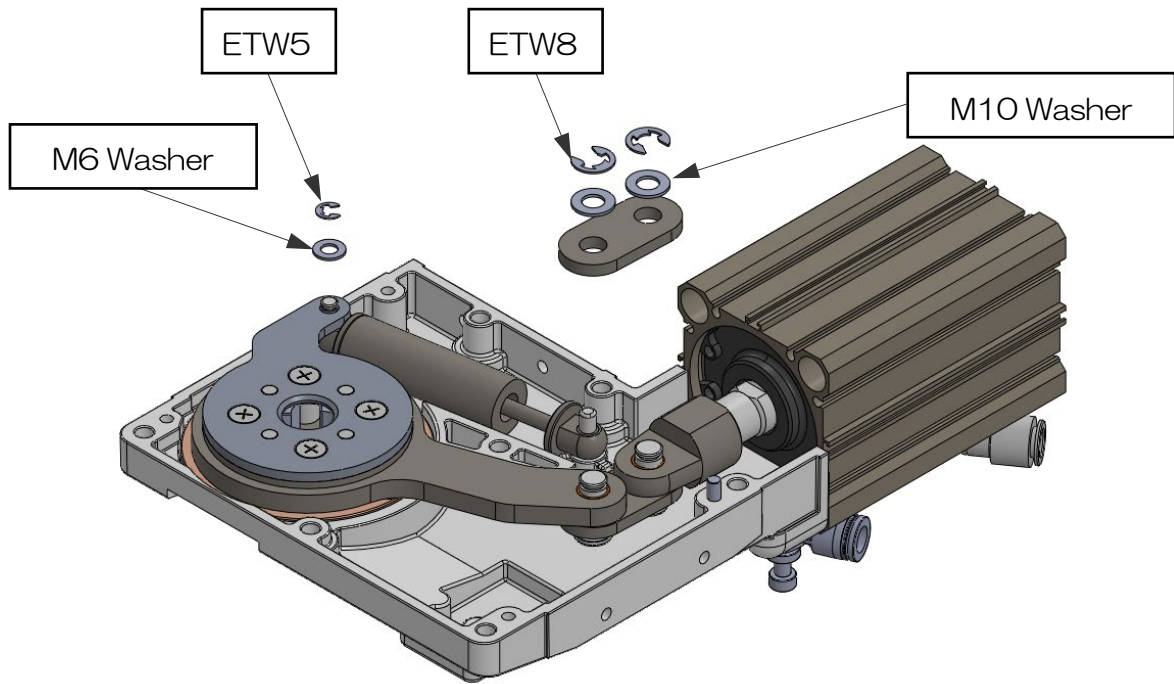


3) Take off the upper gear case by unscrewing the cap bolts of the cylinder.

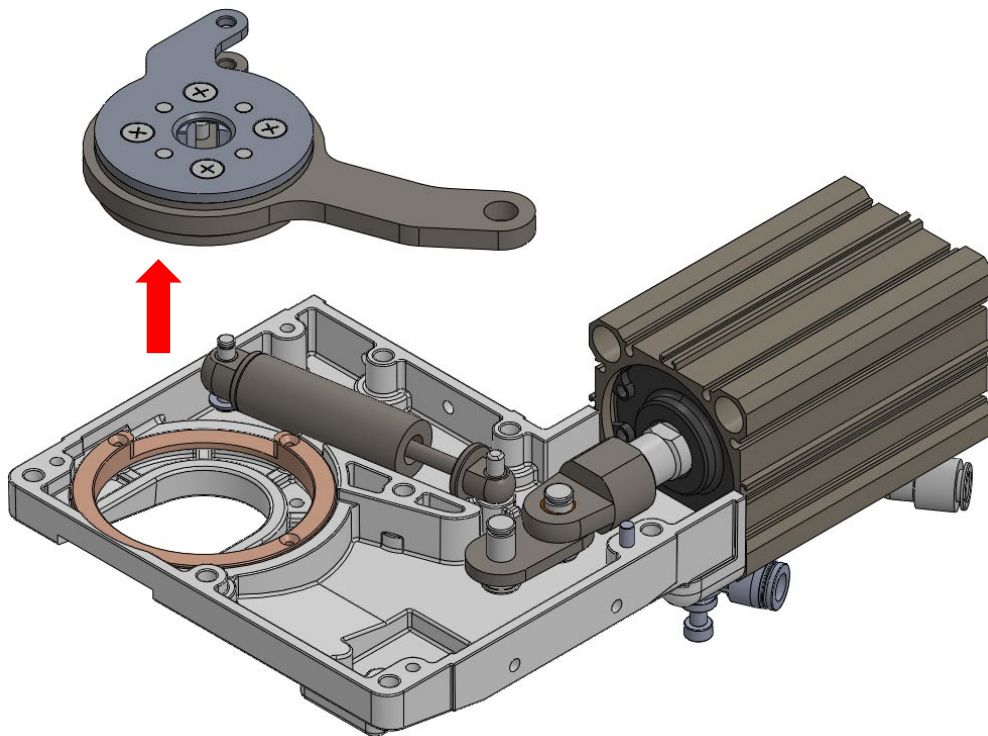
※The screwing torque when assembling must be $18.5\text{N} \cdot \text{m}$ with loctite.



4) Remove the arm ring plate and the remove shaft from the remover unit.



5) Take off the remover unit.



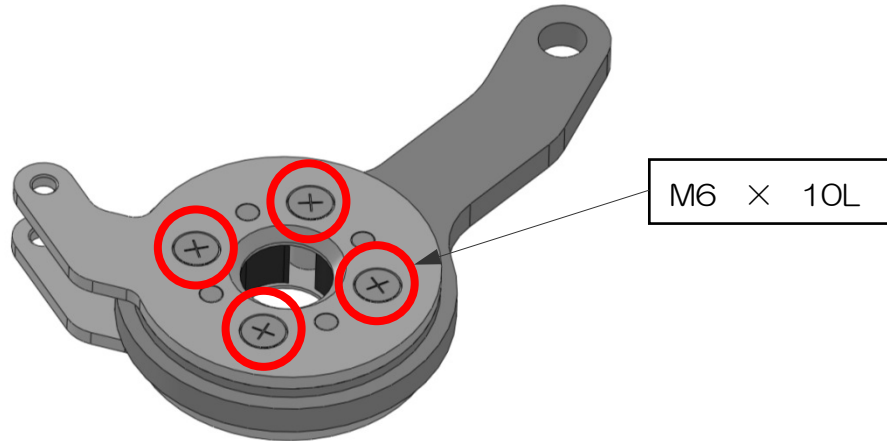
6) Do 1 to 5 in reverse order to exchange new one.

7) Check the operation of the remover unit by test-driving.

8-2. Procedure for changing nails

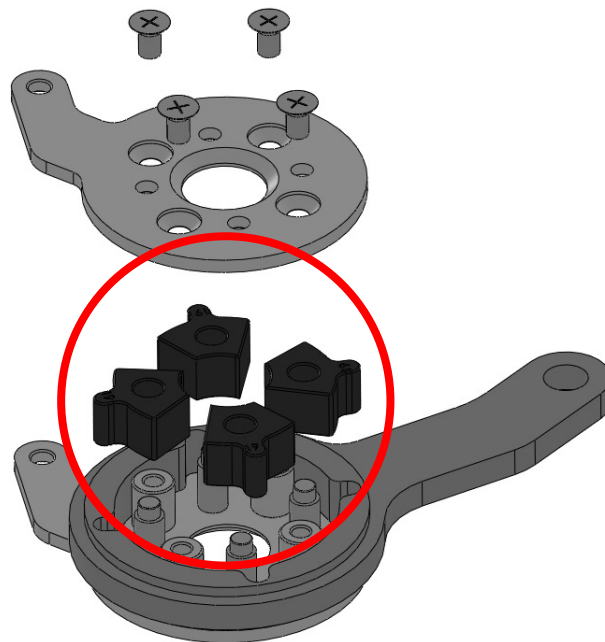
1) Remove bolts(M6 x 4pcs) of upper cover, and lift the upper cover of the remover unit.

※The screwing torque when assembling must be 7.6N • m with loctite.



2) Remove each nail fixed to lower cover.

※Please assemble the nails with printed side up.

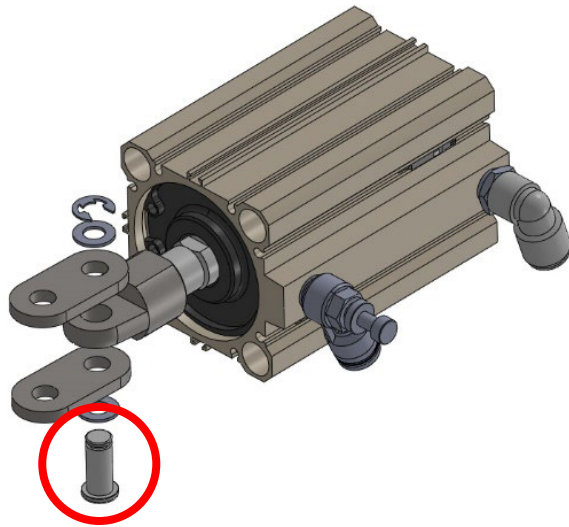


3) Do 1 and 2 in reverse order with new nails.

4) Check the nails direction properly.

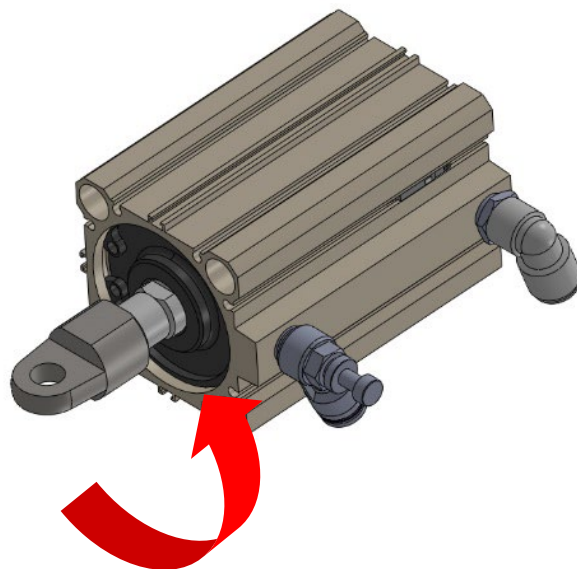
8-3. Procedure for changing the cylinder

- 1) Cut off the air supply.
- 2) Remove the remover unit (Please refer to 8-1).
- 3) Remove the remove shaft and the arm ring plates (refer to the picture below).



- 4) Please turn a knuckle joint counterclockwise and remove from a cylinder rod.

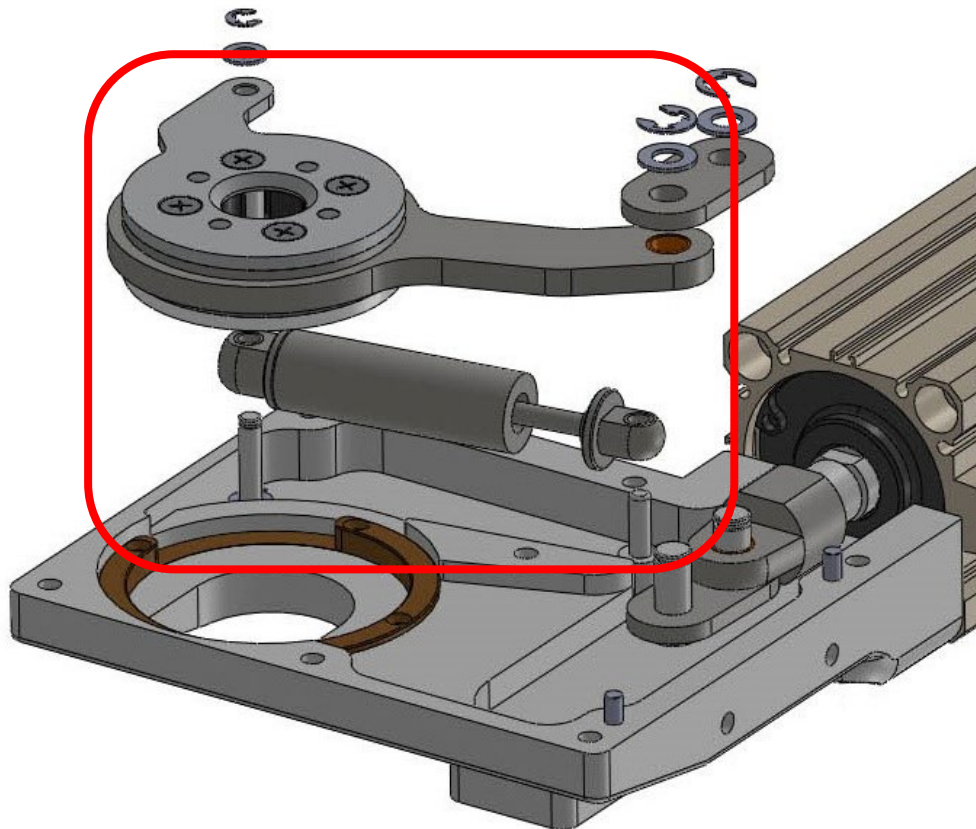
※The screwing torque when assembling must be $45.0\text{N} \cdot \text{m}$ with Low Strength Loctite.



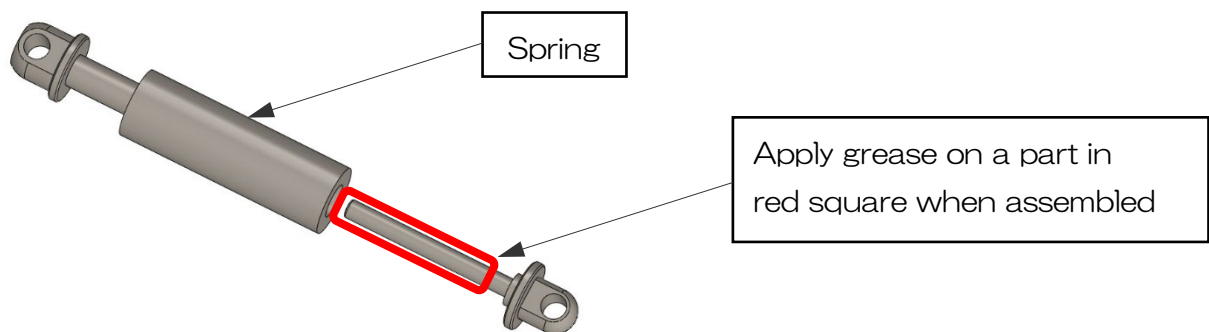
- 5) Cylinder exchange is completed in reverse order 1 to 4.
- 6) Check the operation of the cylinder by test-driving.

8-4. Procedure for changing the spring

- 1) Cut off the air supply.
- 2) Remove the remover unit (Please refer to 8-1).
- 3) Separate remover unit while bringing up the spring and spring guide.



- 4) Take spring guide B out to exchange the spring inside with new one.



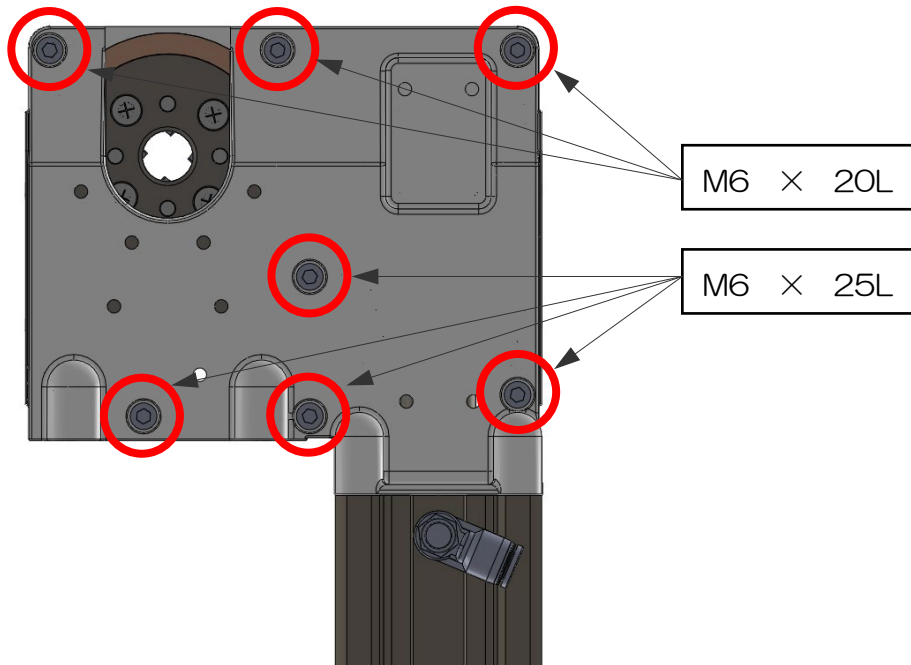
- 5) Spring exchange is completed in reverse order 1 to 4.

8-5. Procedure for grease up

1) Cut off the air supply.

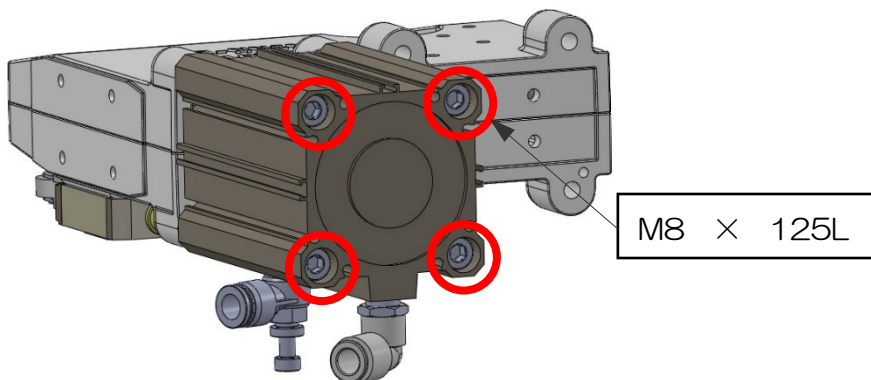
2) Remove the bolt referring to the figure below. (M6 x 7pcs)

※The screwing torque when assembling must be $7.6\text{N} \cdot \text{m}$ with loctite.

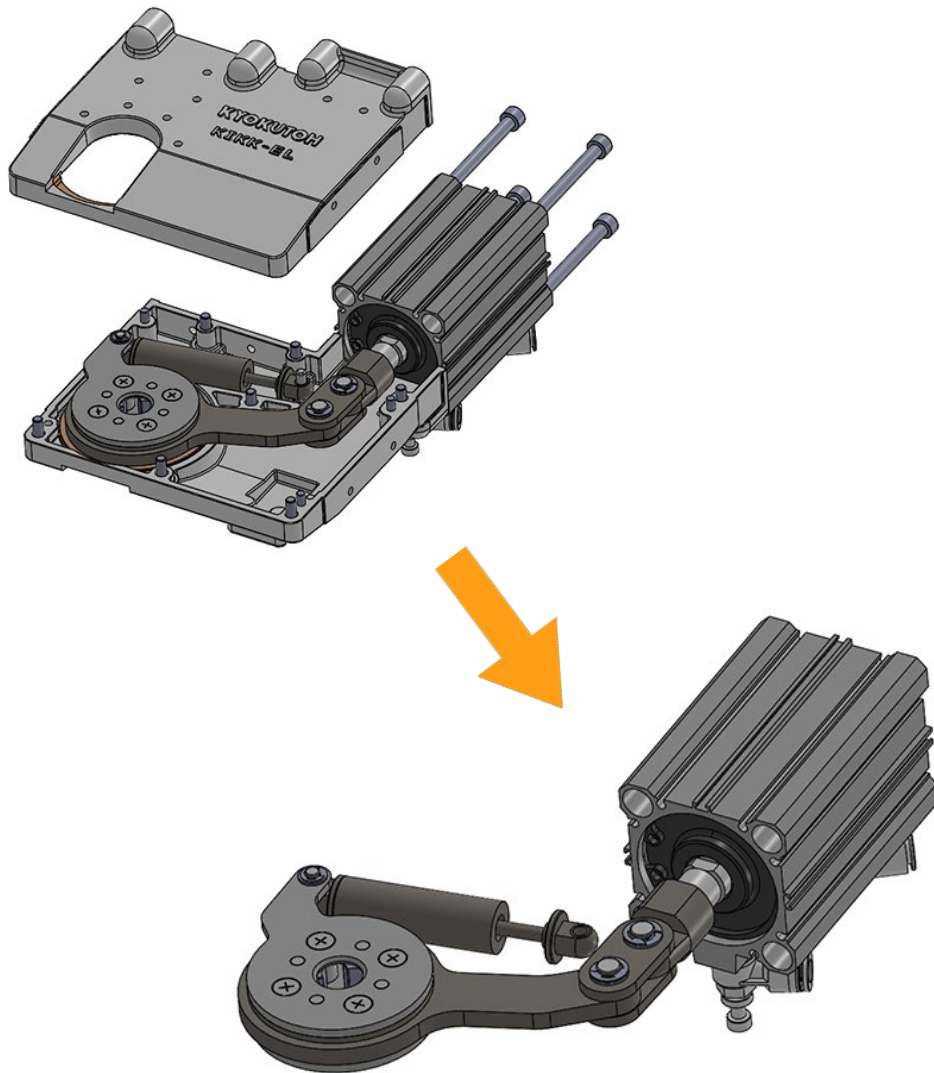


3) Take off the gear case by unscrewing the cap bolts of the cylinder.

※The screwing torque when assembling must be $18.5\text{N} \cdot \text{m}$ with loctite.

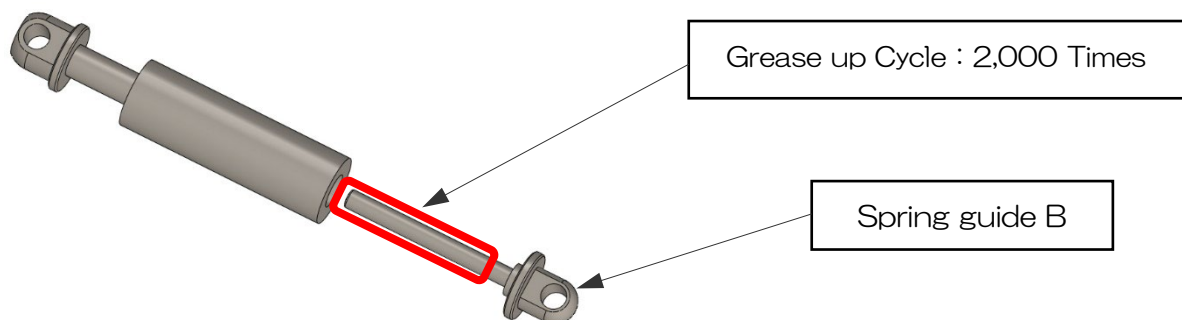


4) Take off the gear case and remove the remove unit with cylinder.



5) Take spring guide B and grease up.

※Recommended grease are Moly HD grease No.1 or equivalent.



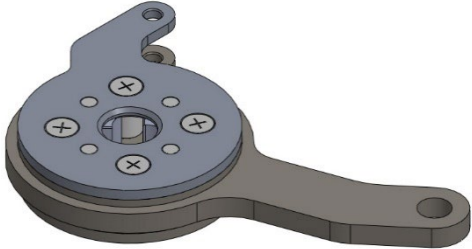
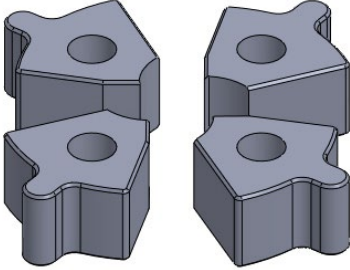
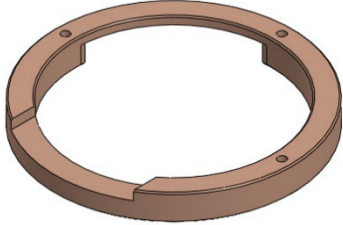
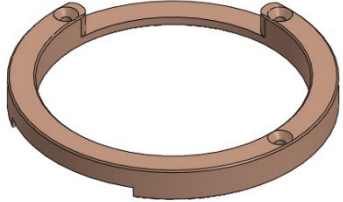
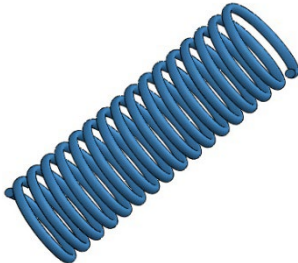
6) Grease up is completed in reverse order 1 to 5.

9. Problems and Solutions

Abnormal Condition	Causes and Solution
Cap tip is not removed.	<ul style="list-style-type: none"> *Breakdown of a remover unit <ul style="list-style-type: none"> →Check the nails and exchange for new one if necessary and change it for new one. *Breakdown of a cylinder. <ul style="list-style-type: none"> →Check the air cylinder and exchange for new one if necessary. *Tip does not fit in cartridge. <ul style="list-style-type: none"> →Check the cap tip size. *The motion when removing is not proper. <ul style="list-style-type: none"> →Confirm the robot teaching. *The air pressure is too low, or it is not supplied. <ul style="list-style-type: none"> →Check the air supply. →Check the air pressure and adjust it. (Recommended:0.5MPa)
Removed cap tip does not fall.	<ul style="list-style-type: none"> *The nail might be clumping the tip. <ul style="list-style-type: none"> →Rotate the nail to retract the nail. *A cylinder is not returned. <ul style="list-style-type: none"> →Check the air pressure and adjust it. (Recommended:0.5MPa) →Check the operation of a cylinder and adjust it. *Remover nails not match a cap tip. <ul style="list-style-type: none"> →Check the cap tip size and use proper cap tip.
Cap tip cannot be inserted.	<ul style="list-style-type: none"> *Robot teaching is correct. <ul style="list-style-type: none"> →Adjust the horizontal • vertical of the robot gun. Perform the insertion operation at the cap tip center location. *Loading cannot be performed in the correct position of the tip cartridge. <ul style="list-style-type: none"> →Adjust the position so that the grooves of the cap tip and picker are aligned. *Applied pressure is low. <ul style="list-style-type: none"> →Set it the recommended applied pressure (100kgf-150kgf).

10. Replacement List

■Name list

	<p>Product Name : Remover unit Model (for $\phi 13$) : KIKK-EL-ReU-TYPE-13 (for $\phi 16$) : KIKK-EL-ReU-TYPE-16 (for $\phi 19$) : KIKK-EL-ReU-TYPE-19 (for $\phi 20$) : KIKK-EL-ReU-TYPE-20 ◆Required Quantity : 1 ◆Exchange Cycle : 4,000 Times</p>
	<p>Product Name : Nails Model (for $\phi 13$) : KIKK-EL13-P-001-13 (for $\phi 16$) : KIKK-EL16-P-001-16 (for $\phi 19$) : KIKK-EL19-P-001-19 (for $\phi 20$) : KIKK-EL20-P-001-20 ◆Required Quantity : 4 ◆Exchange Cycle : 2,000 Times</p>
	<p>Product Name : Upper bush Model KIKK-EL20-P-006U ◆Required Quantity : 1 ◆Exchange Cycle : 2,000 Times</p>
	<p>Product Name : Lower bush Model KIKK-EL20-P-006L ◆Required Quantity : 1 ◆Exchange Cycle : 2,000 Times</p>
	<p>Product Name : Spring Model 51-22100 ◆Required Quantity : 1 ◆Exchange Cycle : 4,000 Times</p>

11. Order Model

■Standard Model

Tip diameter	Model
φ 13	KIKK-EL13S
φ 16	KIKK-EL16S
φ 19	KIKK-EL19S
φ 20	KIKK-EL20S

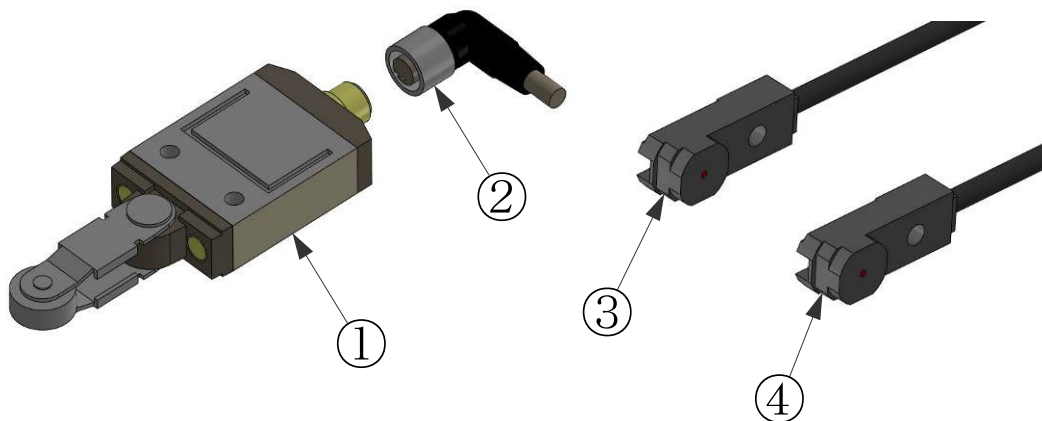
■Attention

- 1) Model other than the above shapes is "KIKK-EL**S-SP".
- 2) KIKK-EL**S cannot accept off set cap tips.
- 3) Please send us drawings of guns and tips if you are not sure whether correspondence by a standard specification is available when ordering its configuration option.
We give you specific details of tip changer model and propriety of the correspondence.

12. Option List

■KIKK-ELS-SE-Pac-NPN or PNP

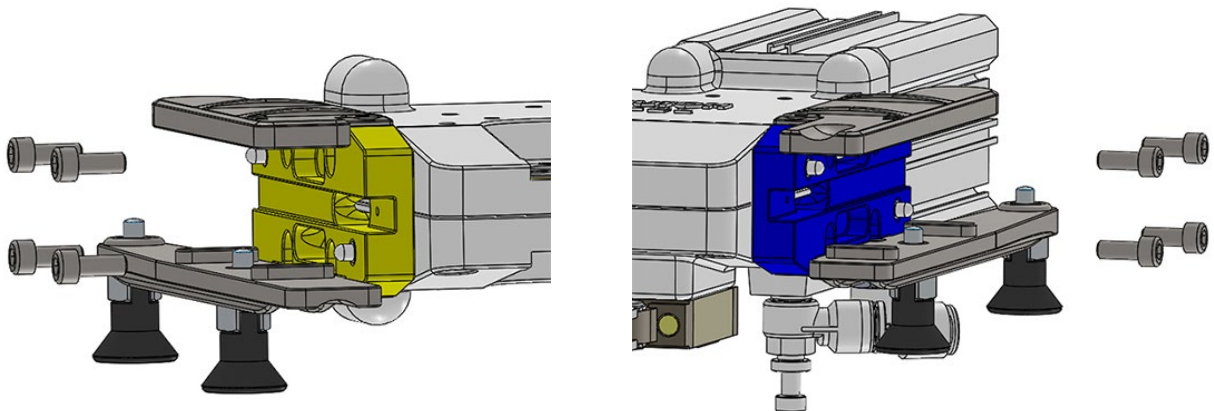
No.	Name	Model	QTY
1	Limit Switch	D4CC-4060(DC30V)	1
2	Plug	XS2F-D421-D-80F(2m)	1
3	Proximity Sensor NPN or PNP	GX-F8A or GX-F8A-P	2
4	Proximity Sensor NPN or PNP	GX-F8B or GX-F8B-P	2



■How to Assemble

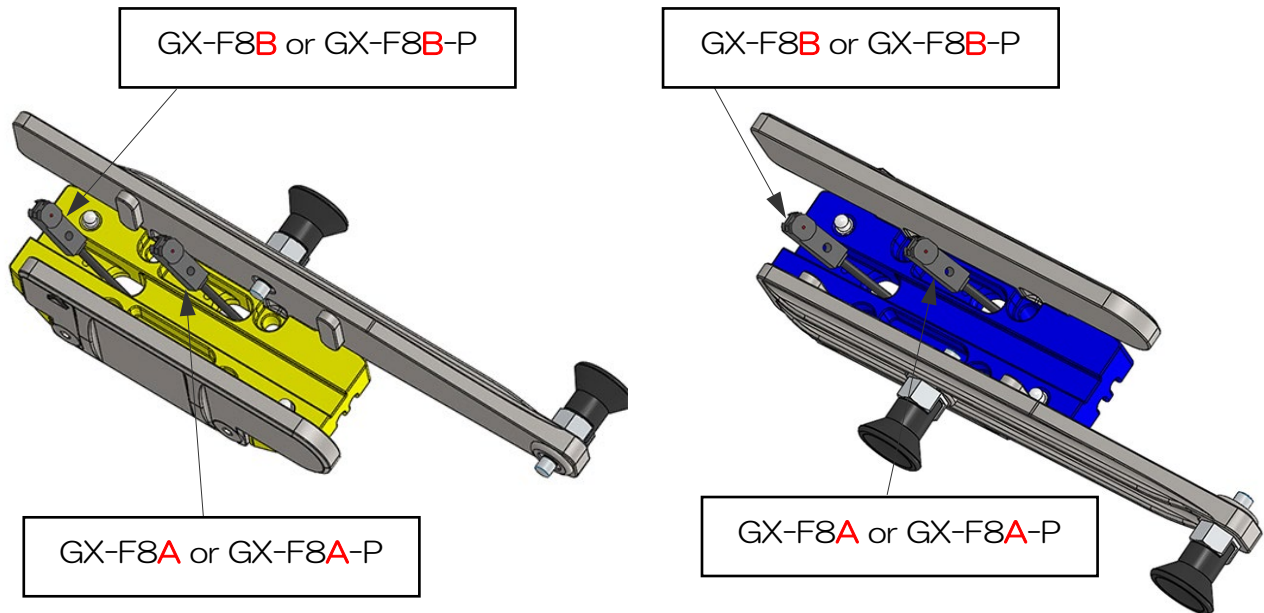
1) Loosen the screws (M6 × 8 pieces), then remove the Adapter Block.

※Nylok patch screws are used. Reuse recommended.

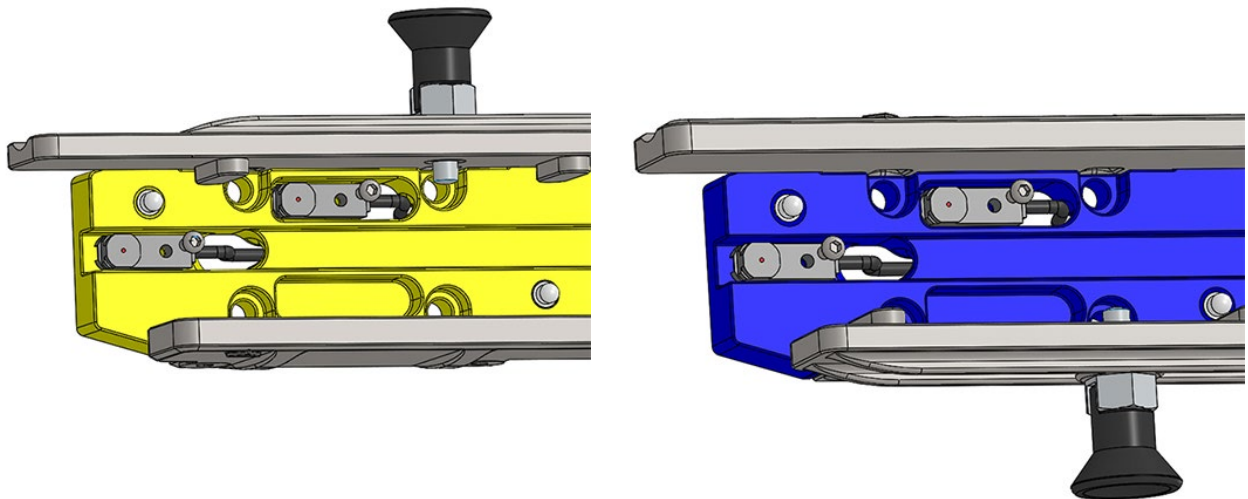


2) Put the sensor through the hole from the back.

※Sensors vary from one to another. Check the mark once again before inserting.



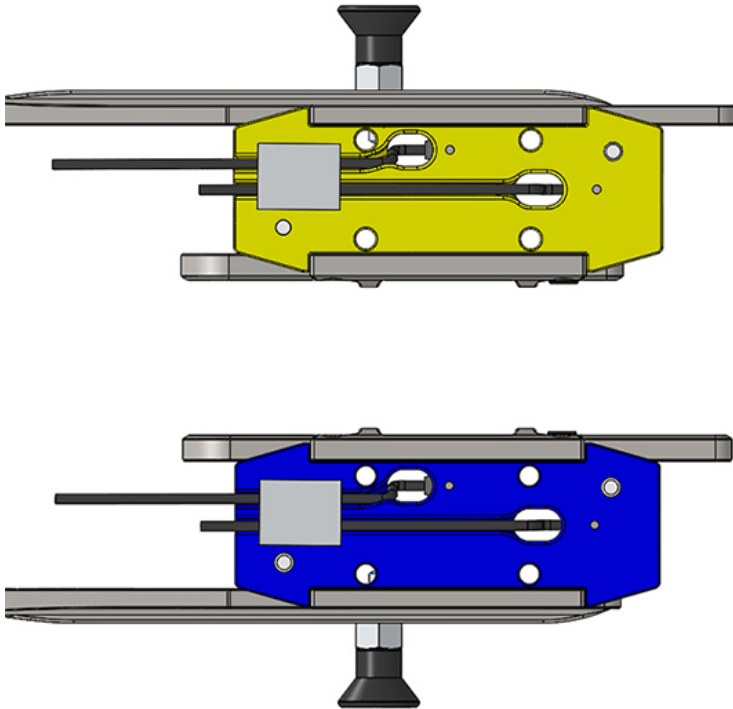
3) Attach with Hex Head Cap Screw (M3 × 4 pieces).



4) Apply a piece of aluminum foil tape to protect cables from jamming.

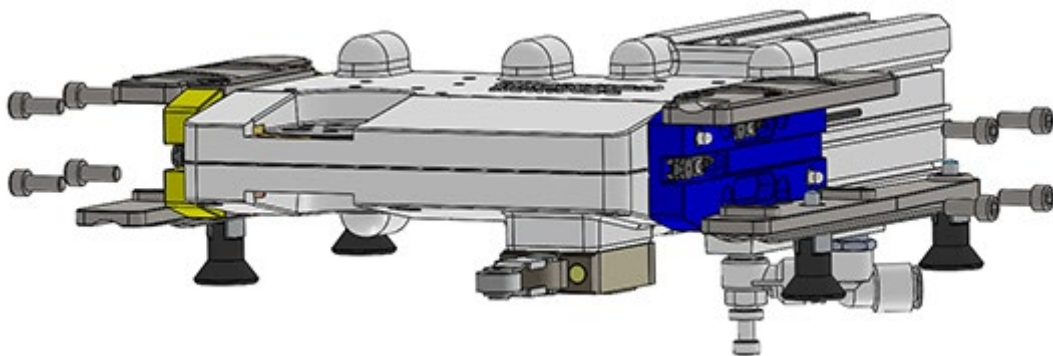
※Aluminum foil tape is a general-purpose item.

Reference scale (t:0.1~0.15 × W:25 × H:20)



5) Attach the Adapter Block with Hex Head Cap Screw (M6 × 8 pieces)

※Nylok patch screws are used. Reuse recommended.

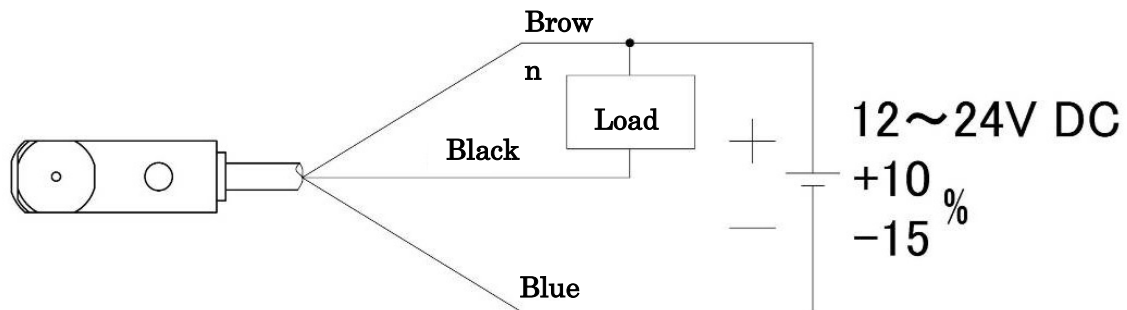


<Wire Reference>

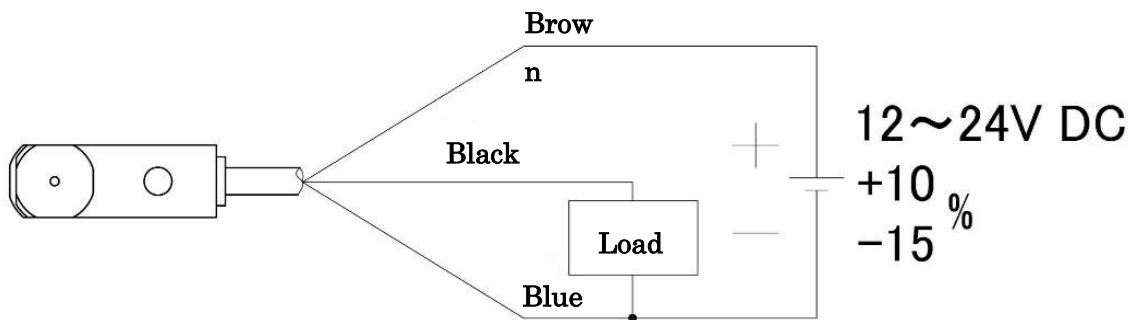
1) Limit Switch Wire Color (D4CC-4060)

Terminal No.	Wire Color	Terminal
1	Brown	COM
2	White	NC
3	Blue	Earth
4	Black	NO

2) Connection Diagram of Proximity Sensor NPN (GX-F8A/GX-F8B)



3) Connection Diagram of Proximity Sensor PNP (GX-F8A-P/GX-F8B-P)



MEMO

Contact

Contact us if there is any damage or machine defects in our products.



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