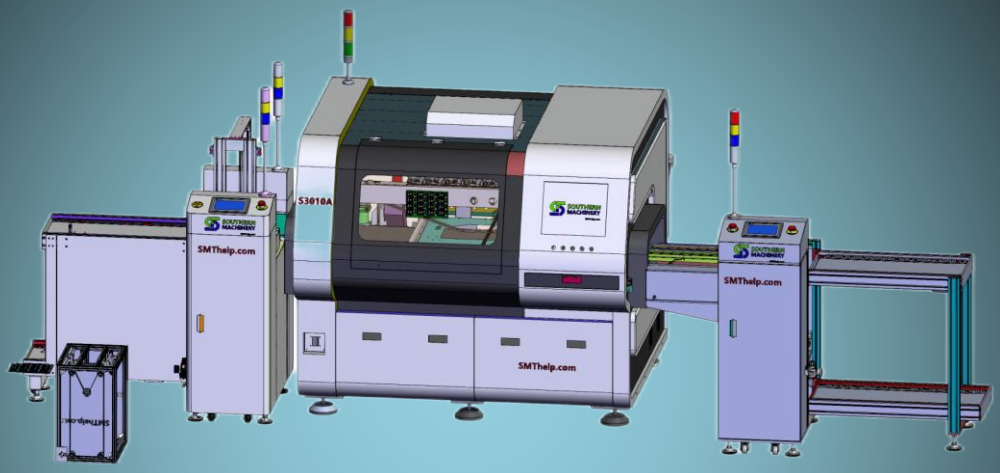

S3010A Automatic Radial Insertion Machine Operation Manual

Southern Machinery tan yis

This “Operation Instruction Manual” provides guidance about machine use and maintenance for the user. It is given with each machine. Users may keep this manual for their reference at any time.

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2021/8/3 Tuesday

CONTENT:

Preface

- This “Operation Instruction Manual” is given with each machine, and please keep this manual for your reference at any time.
- Please read this instruction manual carefully before you operate this machine.
- Due to technology upgrading and product special requirement, machine may be different from instruction manual partially, please be subject to actual machine, we will add additional explanation as much as possible.
- When the equipment is working normally, please keep some space in front of and at the back of the equipment, which is required for operation and maintenance. Besides, please do not block heat emission of the equipment.
- Equipment operating environment: temperature:5～25℃, relative humidity:20～95%, place with no direct sunlight, no condensation, no splashing water, oil and chemical.
- The technician who operates and repairs this machine must be able to use computer.
- The computer that is equipped for the machine can be only used for this equipment, and it can’t be used for other purposes; it is strictly forbidden to connect any other movable memory device with virus with the machine to avoid damaging control system.
- The USB flash disk that is given with machine must be protected from virus, do not use it on other computer casually.
- For the sake of people's safety, when the machine is running, please do not open the front and back movable door and reach out your body into the machine or move close to the machine without taking any safety protections, otherwise, it will bring unnecessary personnel injury.
- Turning the power on and off repeatedly will be one reason of machine breakdown. After turning off power, you need to wait for at least 20 seconds before you can turn on the power again.
- Do not let the machine suffer from impact or strong vibration, otherwise it will cause machine breakdown.
- When you shut off the machine power, please do it according to following sequence; if you do not follow the sequence and shut off the power or restart directly, the data will not be completely saved. It will also cause damage to hard disk. Exit/Shut off procedure: exit from application program → exit from Windows → turn off power
- If you need to temporarily stop using the machine, please keep the machine in the environment as follows:temperature:5～25℃, relative humidity:20～95%, place with no direct sunlight, no condensation, no splashing water, oil and chemical.
  In order to avoid dust, you can cover up the machine (for example, put a cover), but it must be moisture-proof.
- If you do not understand, please contact us. Do not operate it rashly.

Note: please pay attention to affairs mentioned above!

Machine Overview

S3010A machine is high-speed, high-precision, and high-performance equipment. They are a new generation of vertical combined machines independently developed and produced by our company. They integrate our company's automatic loading and unloading machines and vertical Auto Insertion machines. The essence of the machine is integrated into one machine, which can arrange different types of braid components (carbon film resistors, diodes, cylindrical capacitors, etc.) in the chain clip according to the set program sequence for use by the Auto Insertion head. This equipment fixes the Auto Insertion head horizontally, and realizes the precise Auto Insertion in each area of the PCB by the movement of the X and Y mechanisms. The angle of the Auto Insertion is realized by the rotation of the turntable. This series of control software and operating software are also independently developed by our company, and all operations are controlled by a computer.

This series of vertical machines has the following advantages:
△ Full computer control, full English version of the operating system, based on the Windows platform, easy to operate, fast, simple and easy to learn.
△ Using machine vision technology, online automatic programming, automatic correction, automatic identification of MARK points, which improves the degree of automation.
△ AC servo system is adopted to optimize the line, eliminate the instability caused by line faults, and achieve the goal of stable high speed and energy saving.

Software Operation

1. Safety check before operation

Please note: When the machine is newly installed or idle for a long time, the following safety inspections must be done carefully before powering on and ventilating the machine and operating it:
1) Check whether the power supply is at the specified rated voltage.
2) Check whether the main power supply is connected to the machine, whether the fuse is intact, and whether the branch circuit breaker is closed.
3) Whether the equipment is properly grounded.
4) Be sure that no irrelevant objects are left in the electric control box and on the movable parts of the machine.
5) Whether the conveyor belt and timing belt fall off during transportation.
6) Check whether the heavy-duty and high-speed running mechanisms such as the screw rod, slide rail, and Auto Insertion shaft are well connected.
7) Push and pull the X, Y, H, W, L, and J mechanisms by hand to see if they move smoothly.
8) Check whether the limit detection and limit mechanism are dislocated.
9) Check whether the emergency switch is depressed, and check whether the main air source and power switch are in the OFF state.
10) Check whether the wiring plugs and air pipes between the computer, the electric control box, and the main and auxiliary units are well plugged in.

2. The operation interface description

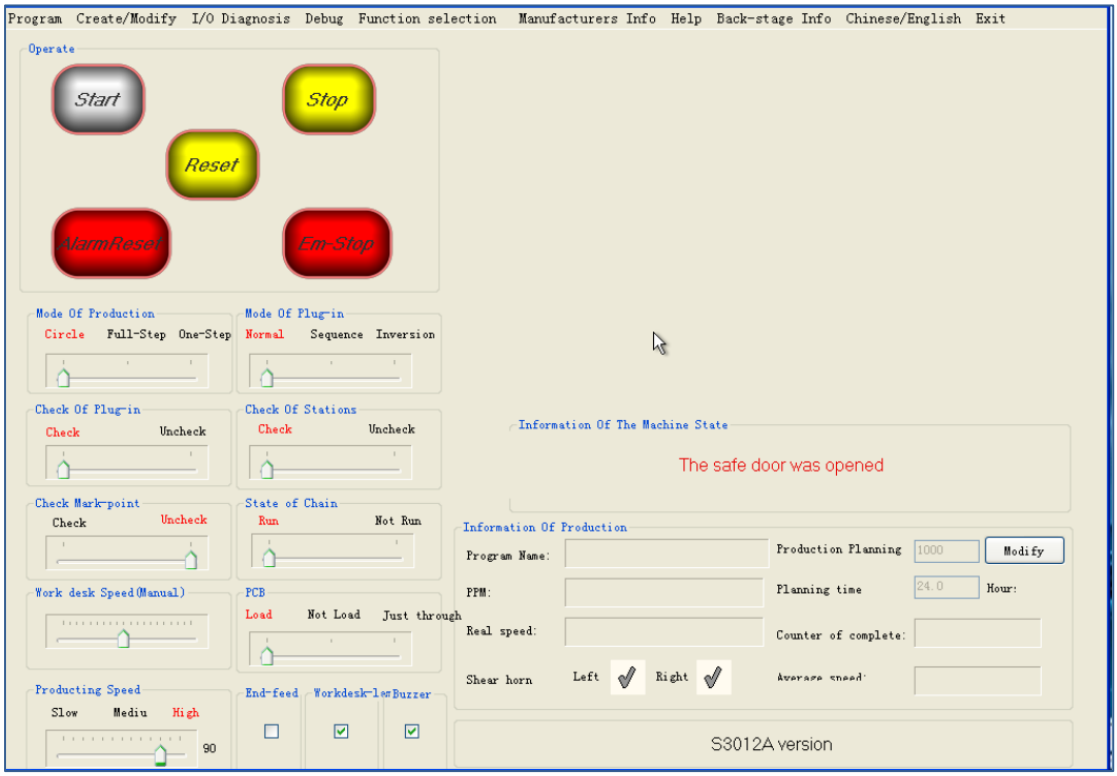


Figure 1

1) Production operation area: This area is for operating and controlling the operation and production of the machine (as shown above):

Button and selection explanation:

Start: Start the Auto Insertion program, and all parts of the machine cooperate to complete the Auto Insertion task.

Stop: The machine stops working and enters the standby state.

Return to zero: Return the worktable and turntable to the starting zero position. It is a necessary move before the first shift and Auto Insertion.

Alarm reset: When the machine encounters a Auto Insertion error during the production process, it will stop working and display the error message in the shutdown information. When the information is repaired, click the **alarm reset** and start production.

Production operation mode:

1. Continuous: that is, the action is executed continuously, and the production quantity is completed.
2. Single step: complete a complete Auto Insertion cycle action.
3. Step-by-step: The Auto Insertion action is divided into several steps to execute, and only one step is completed each time it is started.

Run mode:

1. Normal Auto Insertion: follow the normal Auto Insertion actions to complete the Auto Insertion.
2. Sequential dry run: Move the workbench idler in the order of the program, and the chain does not move.
3. Reverse order dry run: Move the workbench idler in reverse order according to the program, and the chain does not move.

Auto Insertion status detection:

1. Detection: In the process of Auto Insertion, real-time detection of component insertion, if it is found to be badly inserted, it will stop and alarm.
2. No detection: In the Auto Insertion Process, the insertion of the component is not detected.

Unloading status detection:

1. Detection: During the feeding process of the material station, check whether there is material on the material station. If it is detected that there is no material for three consecutive times, the machine will stop and alarm.
2. No detection: During the feeding process of the material station, the situation on the material station is not checked.

MARK point

1. Execution: When there is a MARK point correction command in the Auto Insertion sequence command, execute MARK point correction.
2. Do not execute: Do not execute the MARK point calibration command.

Chain running state

1. Operation: according to the program sequence chain feeding Auto Insertion.
2. Not running: The chain does not feed the Auto Insertion according to the program sequence.

After the blanking is completed, the Auto Insertion of the whole set of materials on the current chain is stopped.

Table moving speed The speed at which the table is moved manually.

Running speed

Adjust the speed of each axis during the Auto Insertion process.

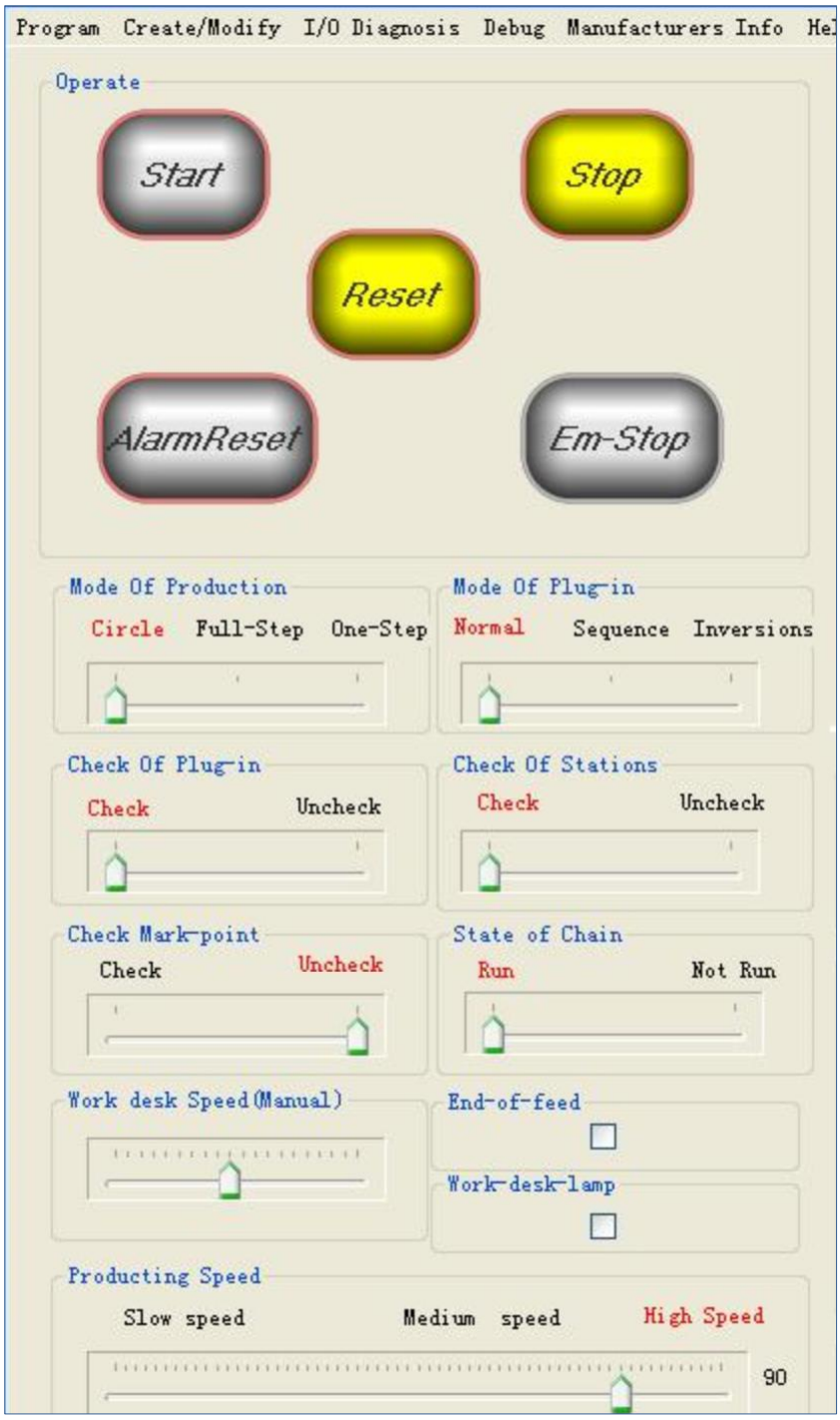


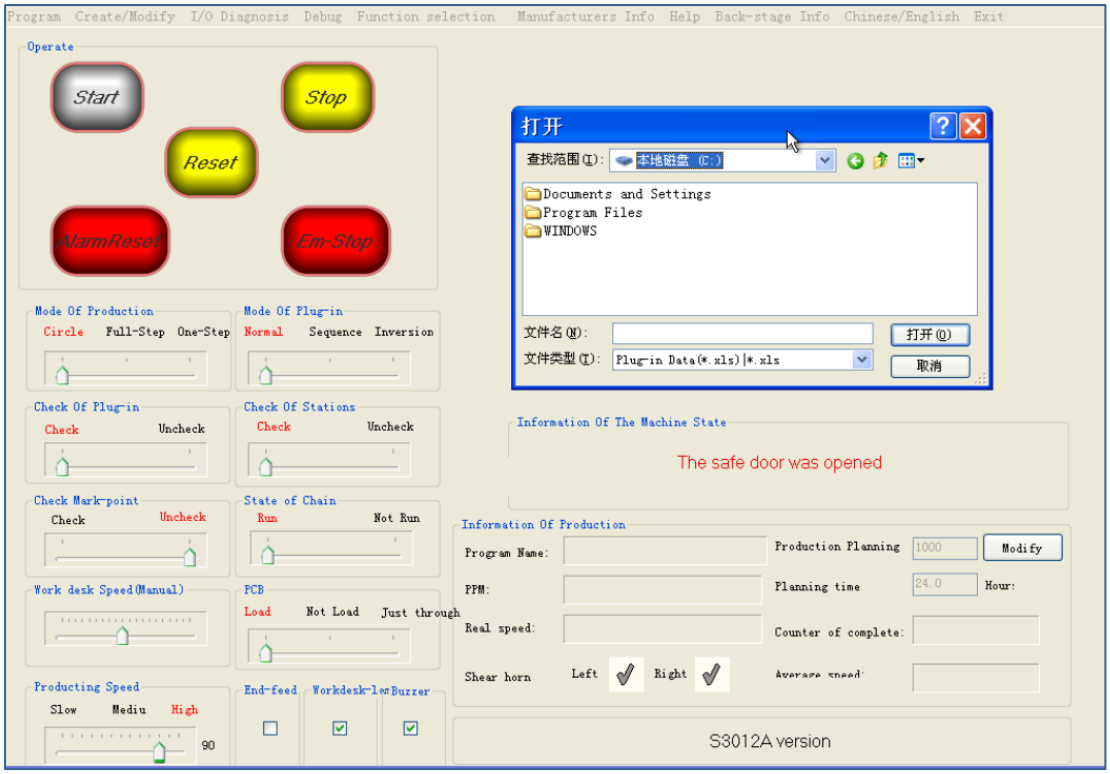
Figure 2

2) The Auto Insertion sequence list

displays the company Log when the Auto Insertion data is not read, and displays the Auto Insertion data when there is Auto Insertion data; when it encounters MARK point correction during production, the CCD image is displayed;

3) Operating information

This area of the Display current production information.



The Figure 3

shutdown information in

shows the reason for the shutdown during the production process. It may be an alarm message or the scheduled production task has been completed.

The program name of the program

shows that is about to or has been running. It would be "open" a different procedure varies.

The production set quantity is the number of PCB boards to be Auto Insertion in production. It will automatically stop after reaching the number value.

PPM statistical

Auto Insertion success rate calculation: (number of components successfully inserted/total number of Auto Insertions)*100%.

The production volume will automatically accumulate the production records every time a component is inserted into a board.

The real-time speed is used to display the actual Auto Insertion speed of the machine. Unit: particles/hour.

Average speed

The insertion speed of the machine in a certain period of time.

Cutting foot induction status

"Left" and "Right" flashing in red indicates that the Auto Insertion is inserted normally, and gray indicates that there is no insertion or an incorrect insertion.

Modify the number of sets number

Modify the preset of Auto Insertion sets. When the preset value is reached, production will be automatically stopped.

3. Toolbar description

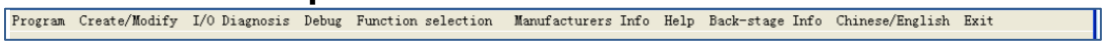


Figure 4

1) File program

import program

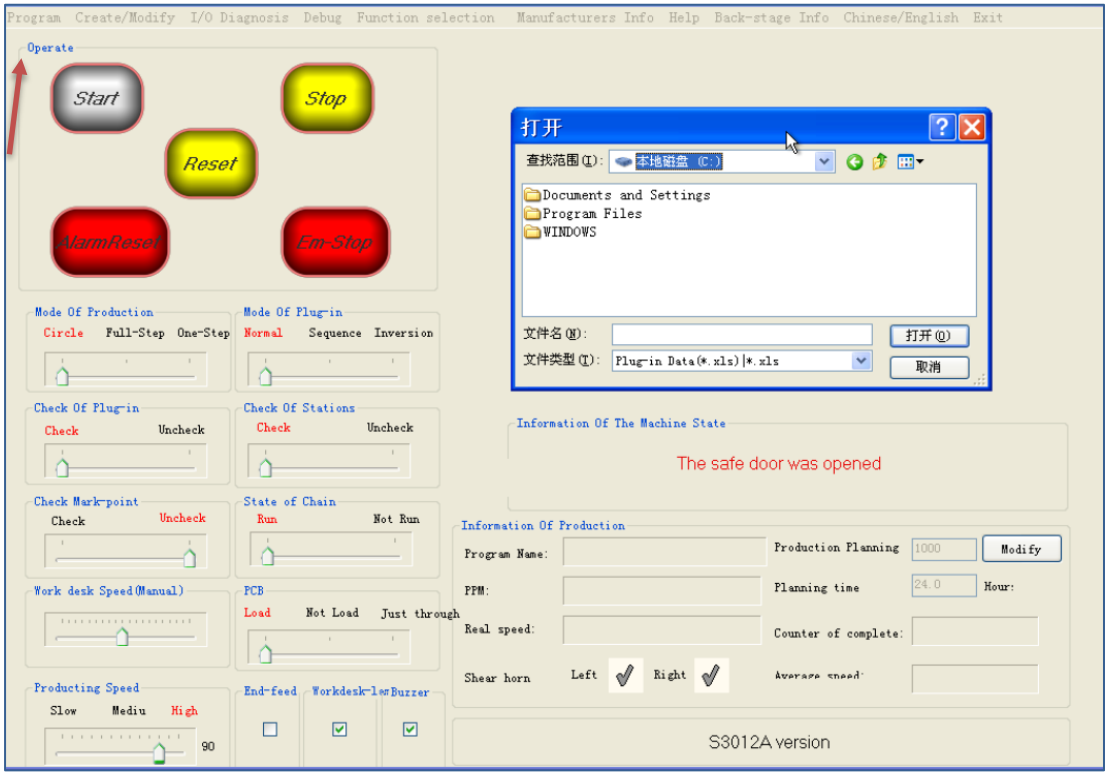


Figure 5

Click File program → Import program, it will pop up that can display all file names

a dialog box(as shown in the figure below), and then click the program name you need to "open" in it, Click "Open" again, and the machine will accept the "task" that will execute the program and overwrite the previous program.

Figure 6

Export Program

Click File Program → Import Program, it will pop up a dialog box for selecting the file name, (as shown in the figure below), you can also enter the file name you need in the file name field, and click "Save" That's it.

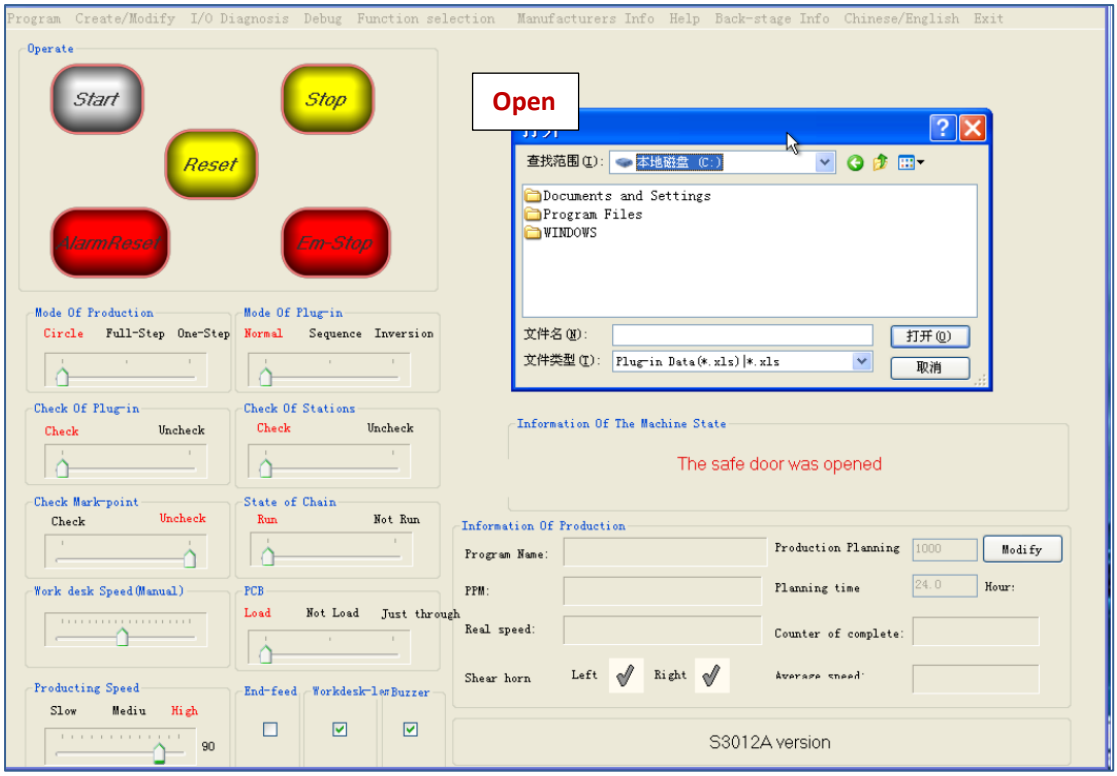


Figure 7

Modify program file

Click File Program → Modify Program File, it will pop up a dialog box for selecting the file name (Figure 6). Then click the name of the program you need to "open" in it, and then click "Open", it will open in the office in .xls format.

2) Make and modify the program

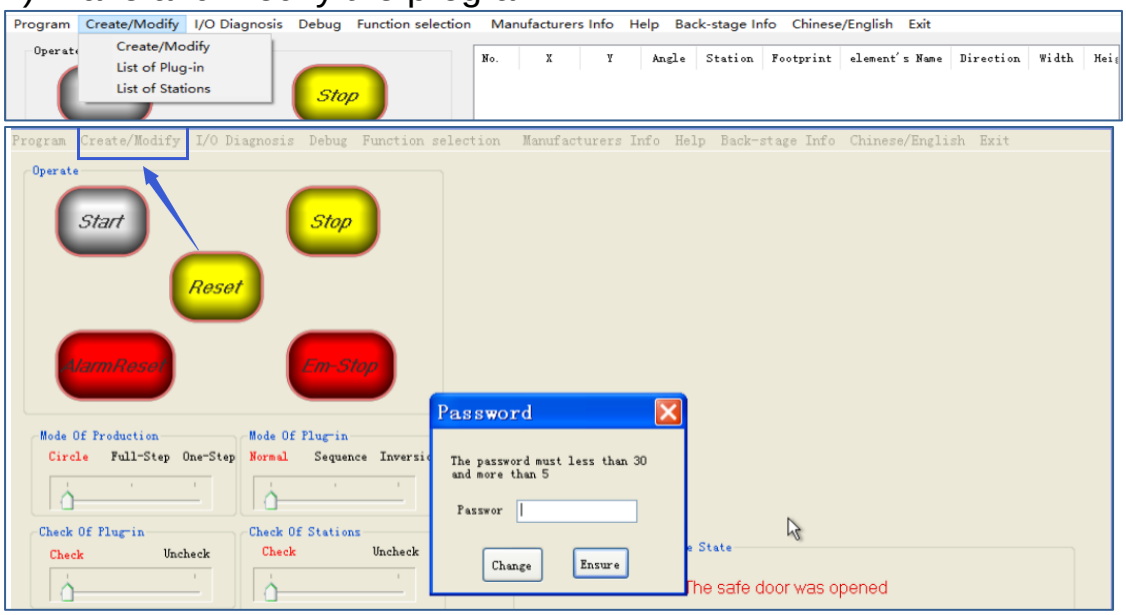


Figure 8

Make and modify the program Generate or modify the Auto Insertion data with the help of the camera.

Click Make and modify program → Make and modify the program, and the following dialog box will pop up

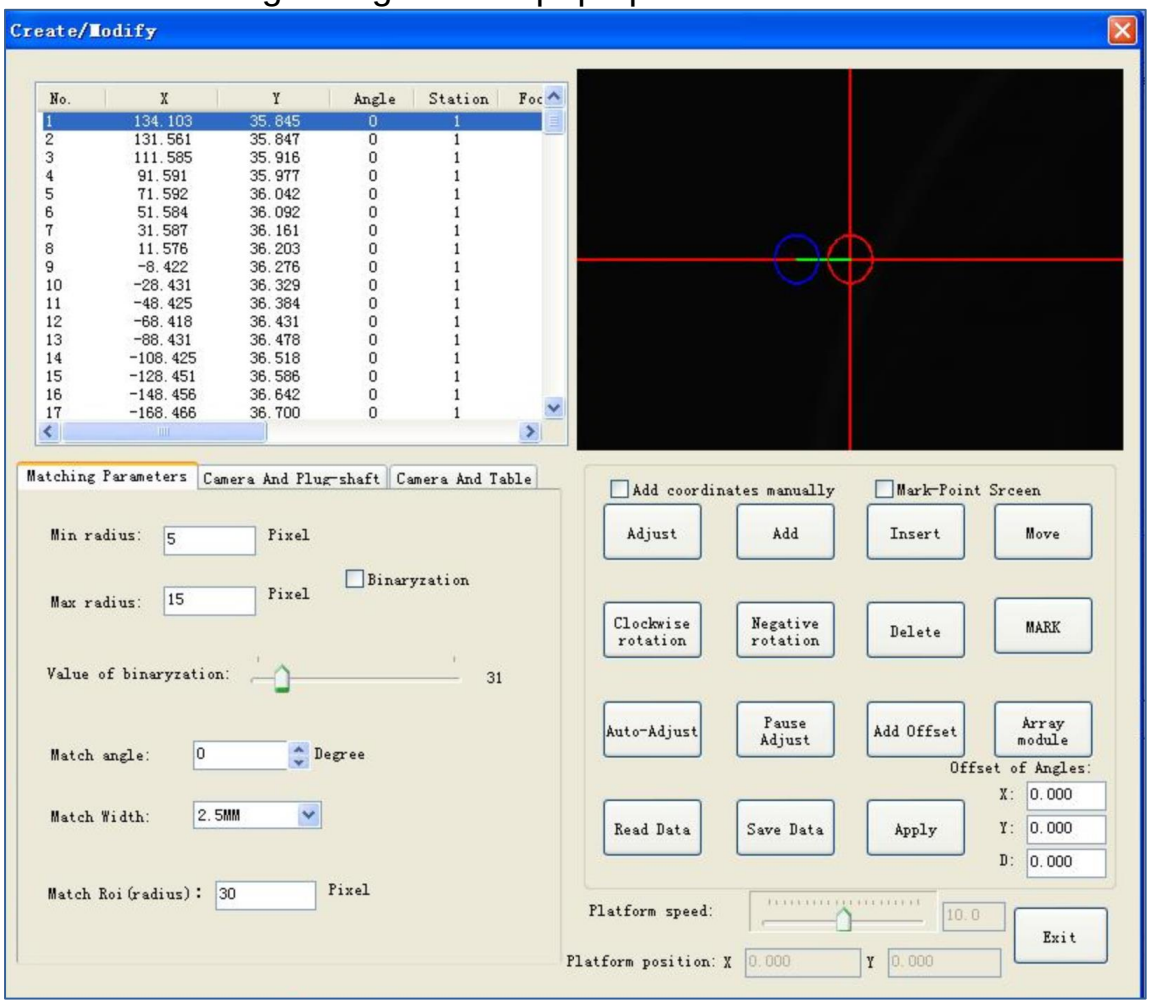


Figure 9

I Data display area: display the generated Auto Insertions Data

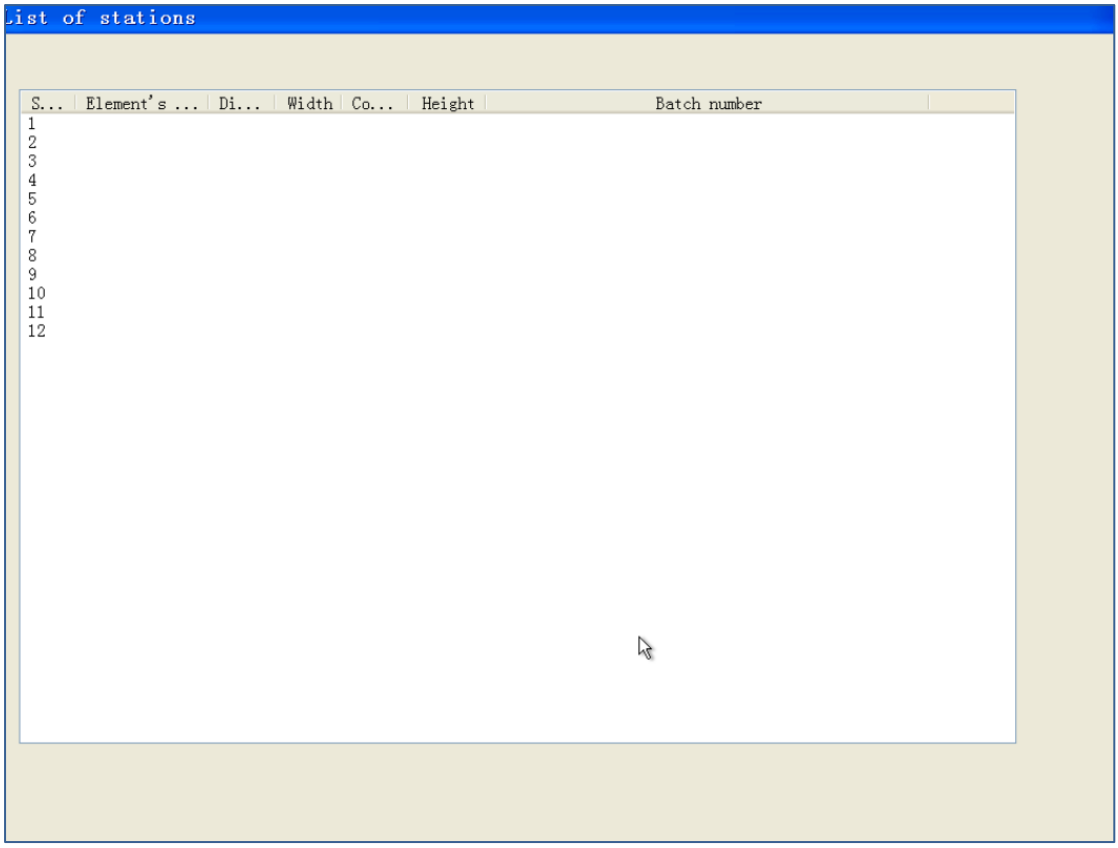


Figure 10

II CCD image area: displays the position where the camera captures the image that has been matched by the Auto Insertion, and helps to generate Auto Insertion data. After modifying the matching difference, the image will react in real time.

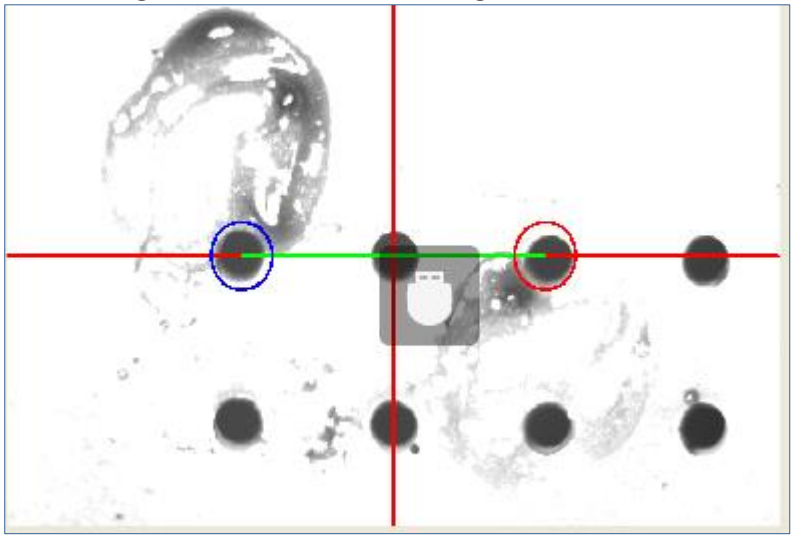


Figure 11

III Matching parameter setting

There are three pages. This area: matching parameter setting, camera Auto Insertion axis position calibration, and camera TABLE platform calibration.

1. Matching parameter setting

Fig. 12

The minimum radius is the minimum target size radius found in the matching ROI area.

The maximum radius is the radius of the maximum target size to be found in the matching ROI area.

The binarized image divides the image according to the threshold into a black and white two-color grayscale image.

The image binarization threshold adjusts the size of the threshold of the segmentation map.

The width of the matching parts is based on the distance between the two pins of the component. The distance range of the machine is 2.5mm, 5.0mm, 3.5mm.

The matching angle is angle based on the between the two pin holes of the component and the X axis, and the distance range of the machine is -90-90.

The matching frame adjustment (circle/radius) adjusts the range of the ROI area.

2. Camera Auto Insertion axis position calibration

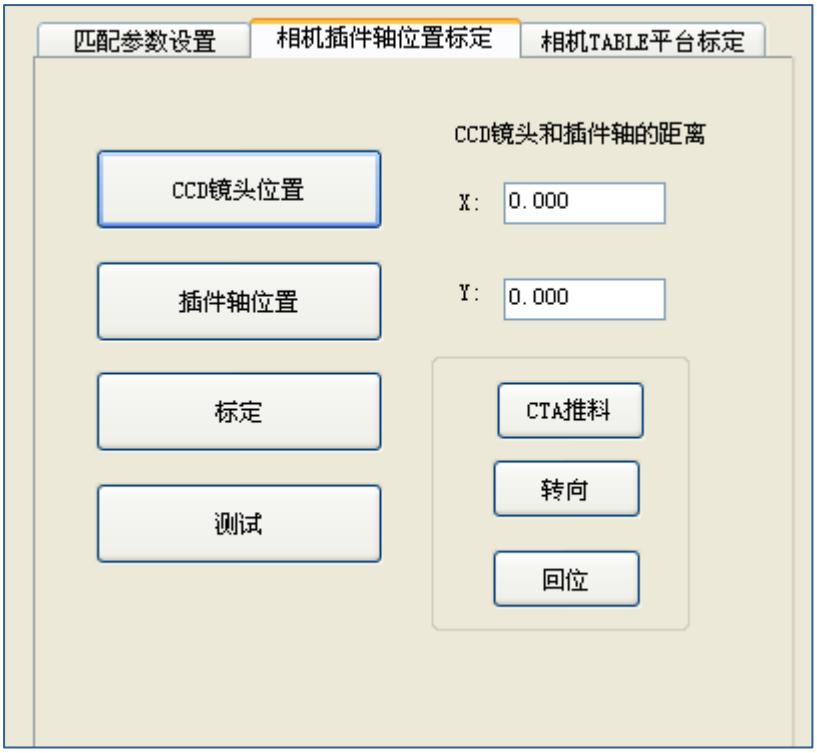


Figure 13

Calibrate the camera position

Move a Auto Insertion position to the ROI area of the camera image, click to calibrate the camera position, the program matches and records the current platform position.

Calibrate the Auto Insertion axis position

Move the Auto Insertion position used to calibrate the camera position to the Auto Insertion axis, fine-tune the XY axis, and manually move H so that H can be inserted at this position. Click the calibration Auto Insertion axis position program to record the current platform position.

After the mark is completed,

The camera position and the axis position of the calibration Auto Insertion are calibrated. Click the calibration complete, the program will calculate the relative position of the Auto Insertion position under the camera image and the Auto Insertion axis under the Auto Insertion axis, and fill in the two edit boxes on the right.

The test

first moves the Auto Insertion position to the ROI area of the camera image. Clicking the test program will first correct the specific position in the ROI area, and then automatically move to the Auto Insertion axis. At this time, you can check whether the data is accurate.

3. Calibration of the camera TABLE platform

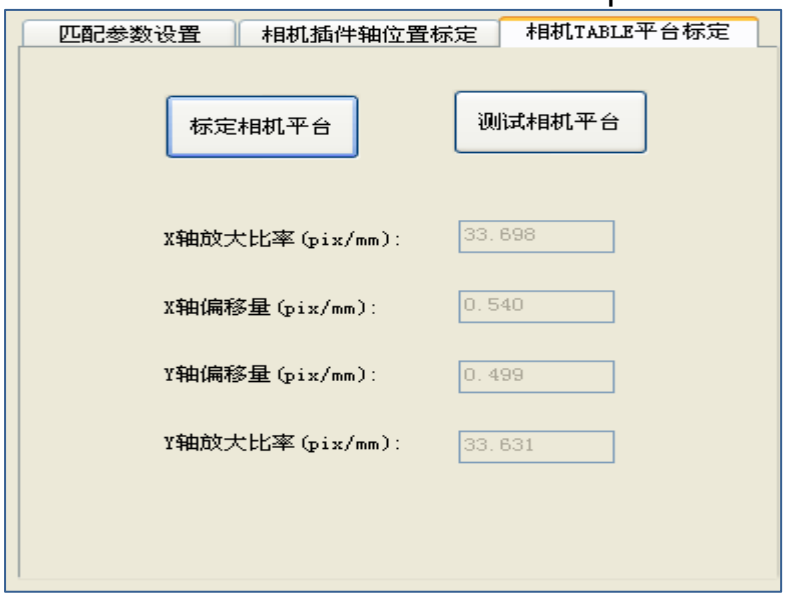


Figure 14

Calibration of the camera platform

Select an area with only one matching target on the matching board, as shown in

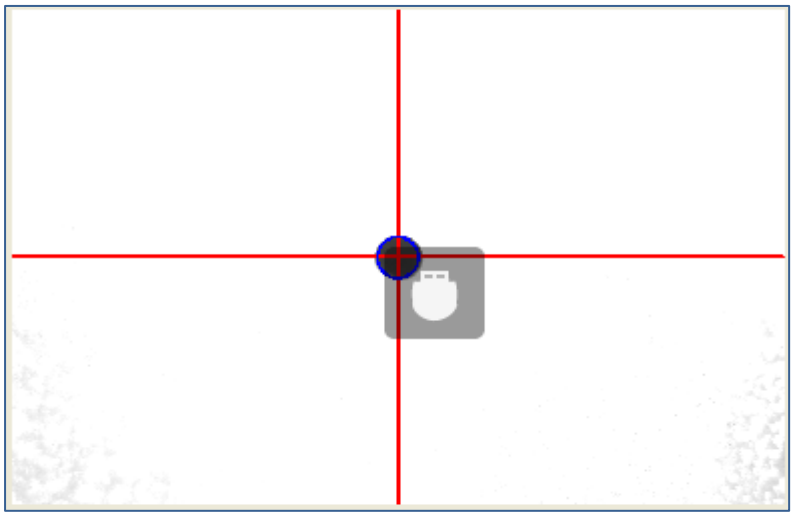


Figure 15

The program will calculate the number of pulses moved by the XY axis and the number of pixels moved by the XY axis on the image to determine the image. The ratio of distance to actual distance.

The test camera platform moves the matching target to any position in the image, and if it can automatically return to the center of the camera, it proves that the calibration is successful.

IV Matching operation area:

Manually coordinates of move the Auto Insertion to the ROI area of the image, and directly record the XY coordinates. It is used to obtain the Auto Insertion position PCB board imaging is extremely irregular and cannot be matched.

correction when

the Replace the Auto Insertion data obtained in the current image ROI area with the data of the selected row.

Add

the Auto Insertion data obtained in the current image ROI area to the Auto Insertion data list the last

Insert missing piece ofintoinsert

the current image the ROI area of the current image to the Auto Insertion data to the position of the currently selected row.

Shift

if the current platform position does not correspond to the focus row, move to the corresponding position;

if the current platform position is in the focus row The corresponding position of, then moves to the corresponding position of the next line of the focus line.

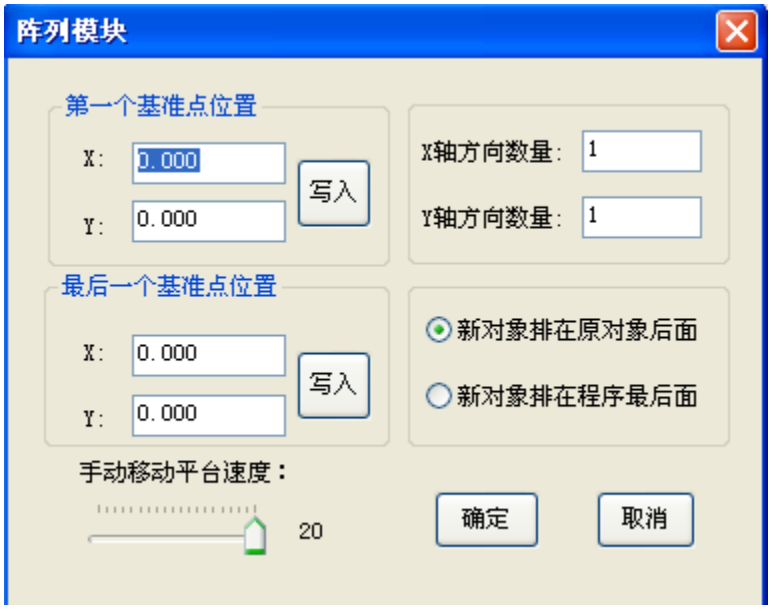
The turntable

rotates 90 degrees clockwise and is recorded in the Auto Insertion data list.

The turntable rotates

counterclockwise by 90 degrees and is recorded in the Auto Insertion data list.

Remove and
delete the rows rotated in the Auto Insertion data list (multiple rows can be continuous).
MARK point
is added to the program to add MARK point position correction,
browse correction,
browse and correct the Auto Insertion data in the Auto Insertion data list from the focus line.
Pause browsing
temporarily stops browsing and correction of Auto Insertion data.
Offset compensation
selects a row, and then moves to the corresponding position of the focus row because of clicking Shift, and clicking offset compensation, you can fine-tune the multiple rows of data before the turntable rotation command or stop command after this row.
array module
After editing an area of the, you can use this command to array several similar modules to



match a certain position in the first module and the same position in the last module, and then enter the number of modules in the X direction and the modules in the Y direction Count, you can generate Auto Insertion data that combines several modules.
Reading the file is the
same as the import program in the menu bar, reading the Auto Insertion data from the file to the Auto Insertion data list.
The save file is the
same as the export program in the menu bar. The Auto Insertion data of the Auto Insertion data list is saved to a disk file. If there is no “stop” or “continue” command at the end of the list, the “stop”

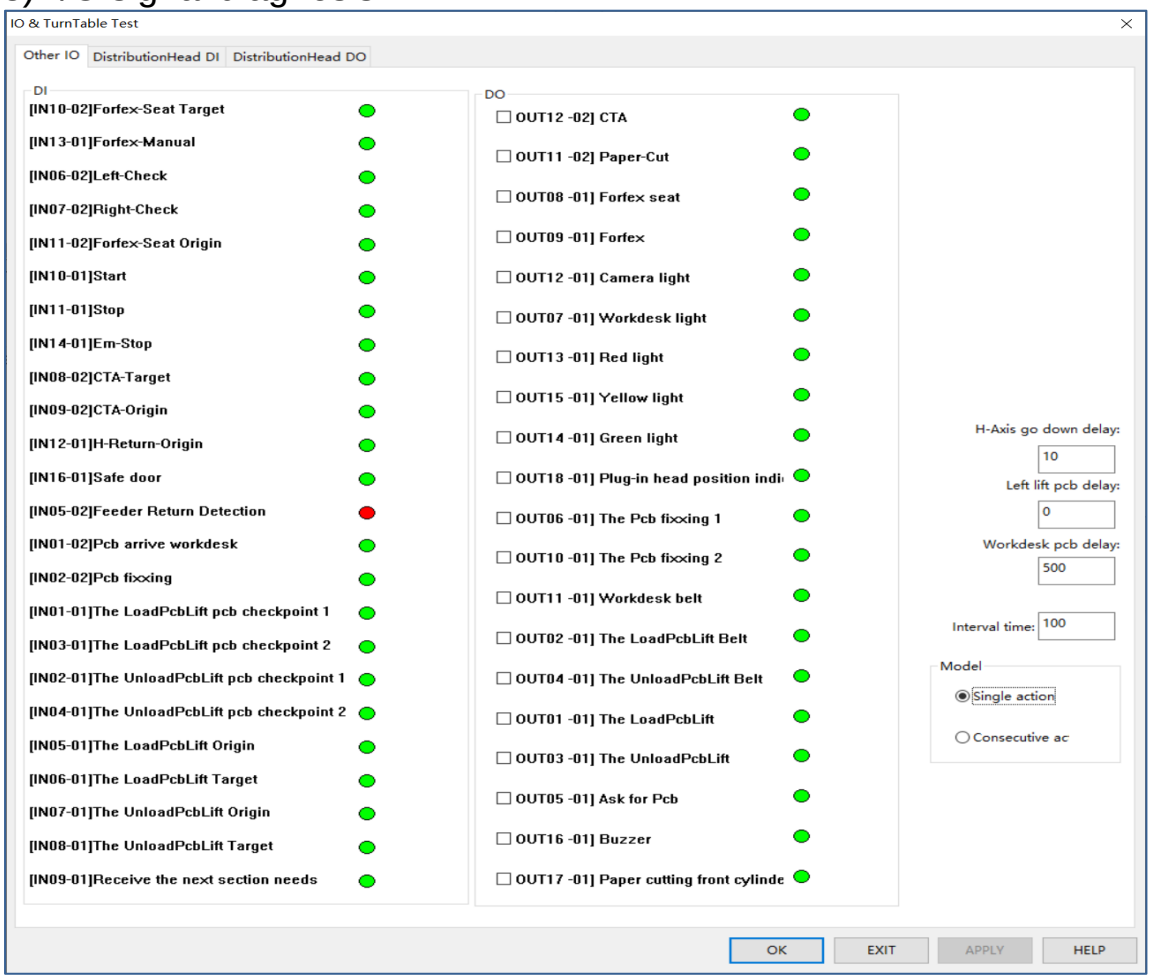
command will be added automatically.
The application
saves the matching parameters to a disk file so that it will be automatically loaded at the next startup.

In the list of station information

, you can select the component type according to the pin name on the PCB board that is set when the program is made, and set the corresponding component name, and determine the feeding direction. When the component type and loading direction are determined, the 0 degree component schematic image of the Auto Insertion will be displayed in the first column of the list. Please check the schematic image of the changed component on the PCB to ensure that the loading is correct.
In addition, you can also set the number of rolls of material when loading, so that when the remaining material at the station is less than 80 pieces, the equipment will give a reminder that the material at a station is about to run out, please pay attention to loading. You can also set the operating speed of the P-axis separately, so that the P-axis speed can be separated when the high and low materials are hit, so as to facilitate better Auto Insertion. The height of the component can be set so that the P-

axis decides whether to lower a part in advance. When the high material is raised, if the component is too high that the mechanism does not allow the chain to feed in advance, the height can be set to greater than 42 to complete a complete insertion. After the action process, the chain will send a piece of material.
feeding station that can replace the component

3) I/O signal diagnosis



DI of the

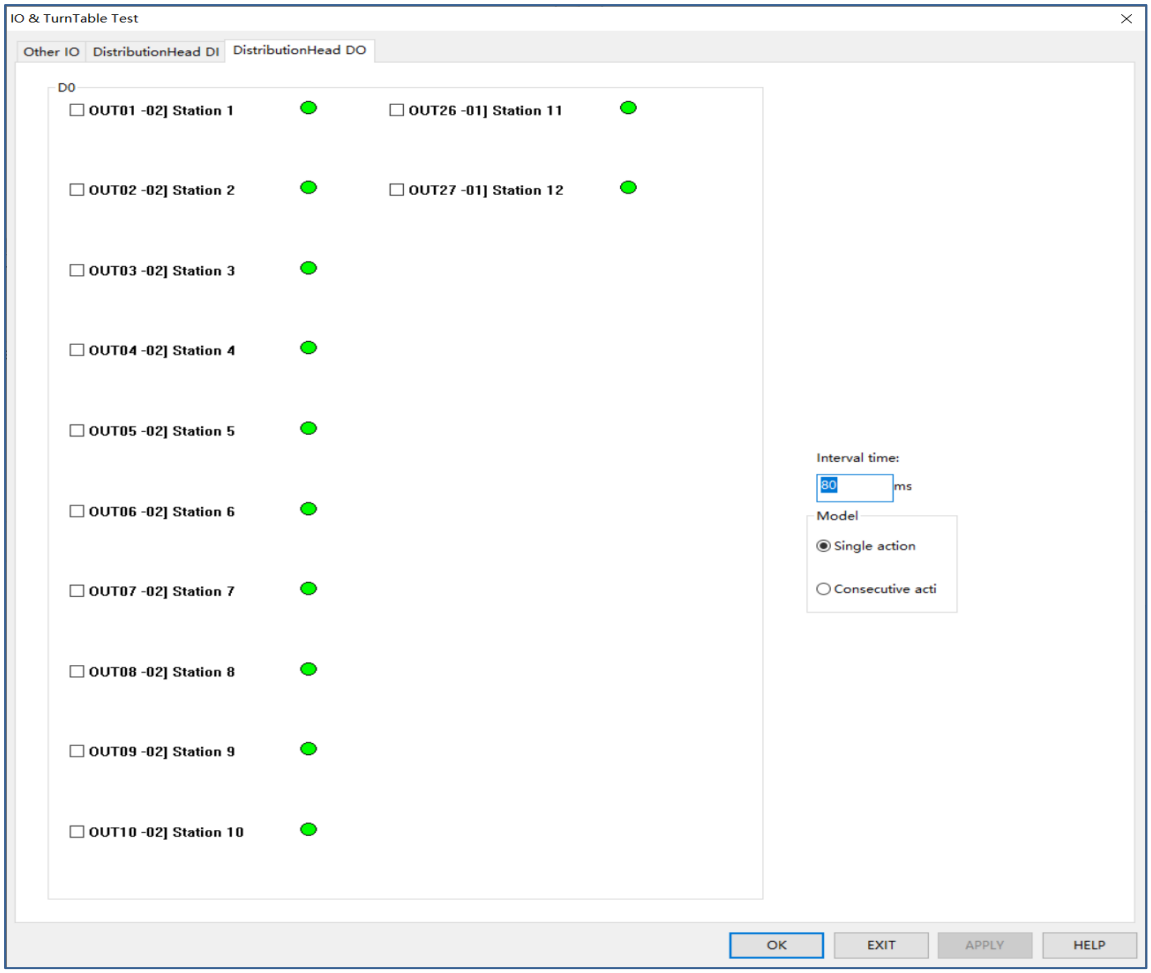
Check left and right the insertion status of the component on the. During Auto Insertion, if the component is not accurately inserted into the hole or the foot cutter does not touch the pin of the component, the machine will stop or give an alarm. The normal state is red, otherwise it is green. This signal is taken from the foot trimmer, and its principle is that a loop is formed between the foot trimmer, the foot trimmer and the ground under normal conditions.

Station detection (upper layer), station detection (lower layer): When the material on the material station is about to be used up, a signal is detected.

Chain detection detects the presence or absence of material on the chain.

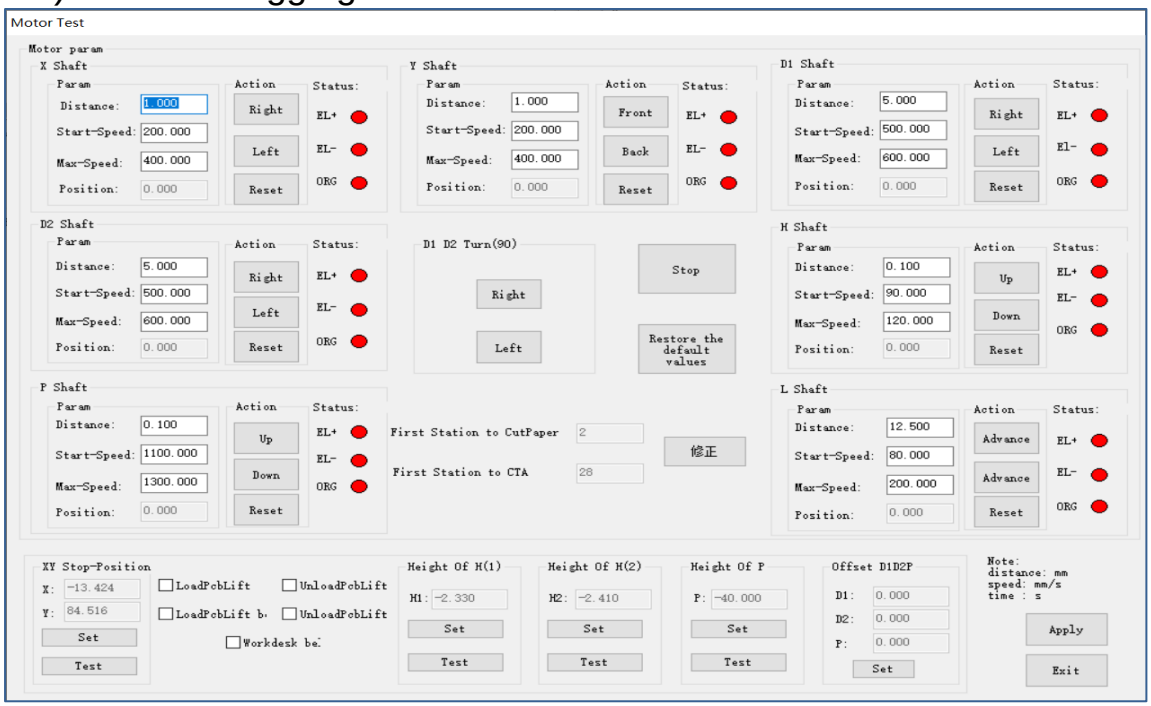
The low position of the cutting foot detects whether the cutting foot is in the low position.
Turntable in position When the magnet on the turntable approaches the "in-position" magnetic sensor of the turntable detection board, the signal output by the turntable detection board. Decide whether the turntable will stop or continue to rotate.
When the zero position induction magnet on the turntable is close to the "zero position" magnetic sensor of the turntable detection board, the signal output by the turntable detection board.
Head home position signal: Click the "H axis" switch on the panel, the H axis will be powered off, after clicking again, the H axis will be powered on and return to the original position.
When the supplementary jumper current Auto Insertion position jumper of theis not inserted successfully, the supplementary jumper will be inserted into the jumper again.
Start When the start switch on the shell is pressed, the state changes from high to low, and vice versa.
Stop When the stop switch on the housing is pressed, the state changes from high to low, and vice versa.

DO
camera light switch the light source of the camera.
The green, yellow, and red lights are warning lights on the housing.
shear pin Drive shears shear pin cylinder for foot operation signal.
The turntable lock is a signal that drives the air cylinder on the turntable lock mechanism.
turntable pressure wheel The signal that thedrives the air cylinder on the turntable pressure wheel mechanism.
Clockwise The relay signal that controls the clockwise rotation of the turntable.
counterclockwise Relay control signal turretrotating counterclockwise.
The base drives the up and down signals of the base cylinder.



The DO signal on the distribution head can be single-acted and linked to test the distribution head

4.1) Motor debugging

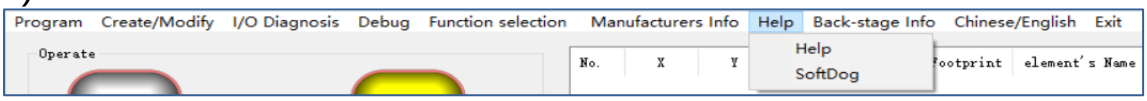


set the movement amount and speed of each axis, and then move each axis according to the direction of the arrow on the button, and test whether the time movement direction of each axis is the same The directions indicated on the arrows are the same; test whether the positive and negative limits are valid and reversed.
Test whether each axis can return to the origin and whether the origin position is correct.
The positive and negative limits are the abbreviations for the photoelectric switch signals at the maximum limit positions in the positive and negative directions of each axis.
origin "Zero point" detection signal for setting.
Stop position X: The actual position of the X axis after the worktable is "zeroed", which must lead the zero position.
Stop position Y: After the worktable is "zeroed", the actual position of the Y-axis must be ahead of the zero position.
Turntable position X: The actual position of the X axis before the turntable starts to rotate.
Turntable position Y: The actual position of the Y-axis before the turntable starts to rotate.
Auto Insertion axis height 1: The Auto Insertion axis with components is inserted down, and the position value of the component pin on the surface of the PCB is a bit higher than the position of the Auto Insertion axis height 2. It is convenient to check whether the Auto Insertion holes and pins are aligned.
Auto Insertion shaft height 2: The position where the Auto Insertion shaft is completely inserted into the PCB surface.

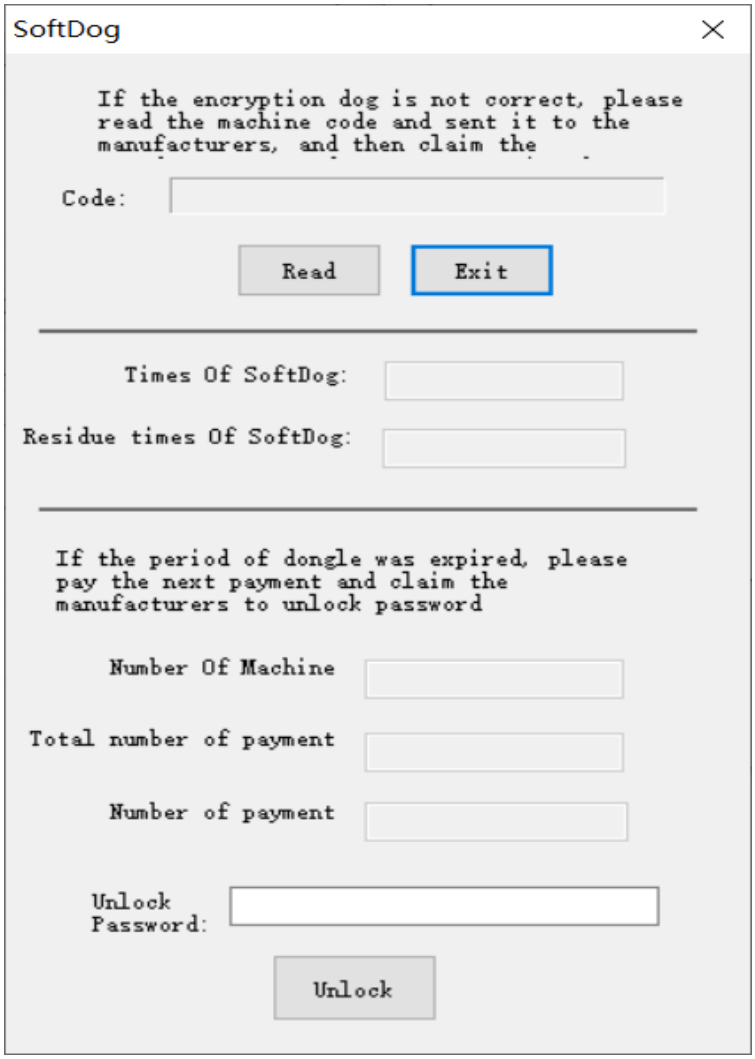
The motor running speed is restored to the factory value: the speed of each axis is restored to the factory guide value when leaving the factory.
Compensation value setting:

4) manufacturer information
After clicking manufacturer information, the FactoryInfo.pdf file in the application directory will be opened.
If this file does not exist, a prompt message will pop up.

5)

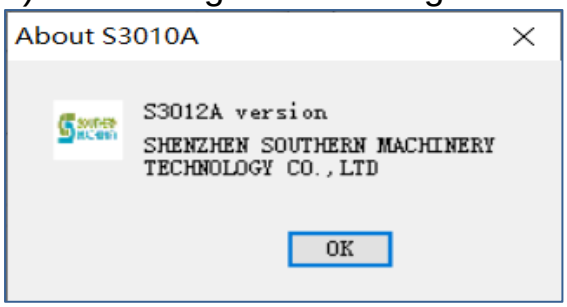


Help
Click Help, it opens IST-3003-HELP.pdf file in the application directory.
If this file does not exist, a prompt message will pop up.
After the dongle
clicks on help, a dialog box will pop up.

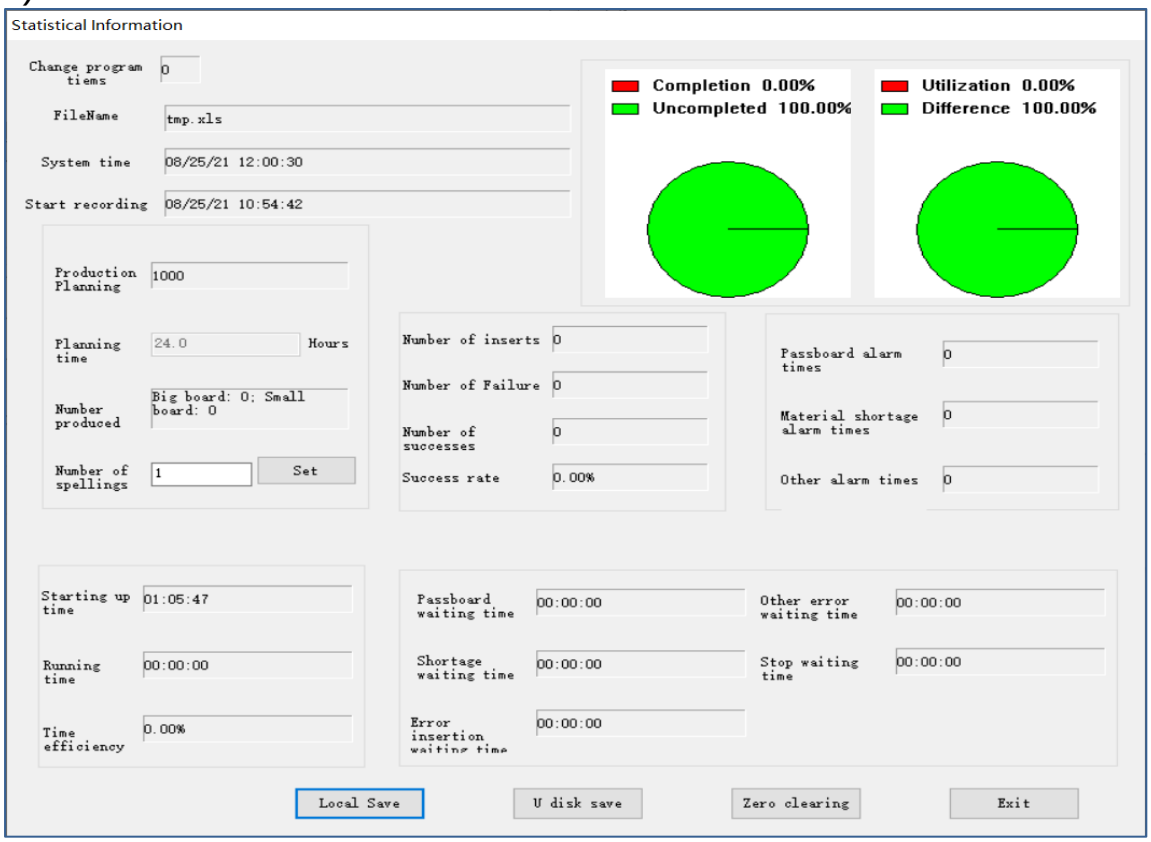


If the dongle of the current machine is incorrect, please read the machine code and send this machine code to the manufacturer, and then ask the manufacturer for a new dongle.
If the installment payment method is used, the effective use time of installments has come, and the dongle is locked, please send the machine number and the number of installments to be paid to the manufacturer, and ask for the unlock password to unlock.

6) The background management



7) statistics of



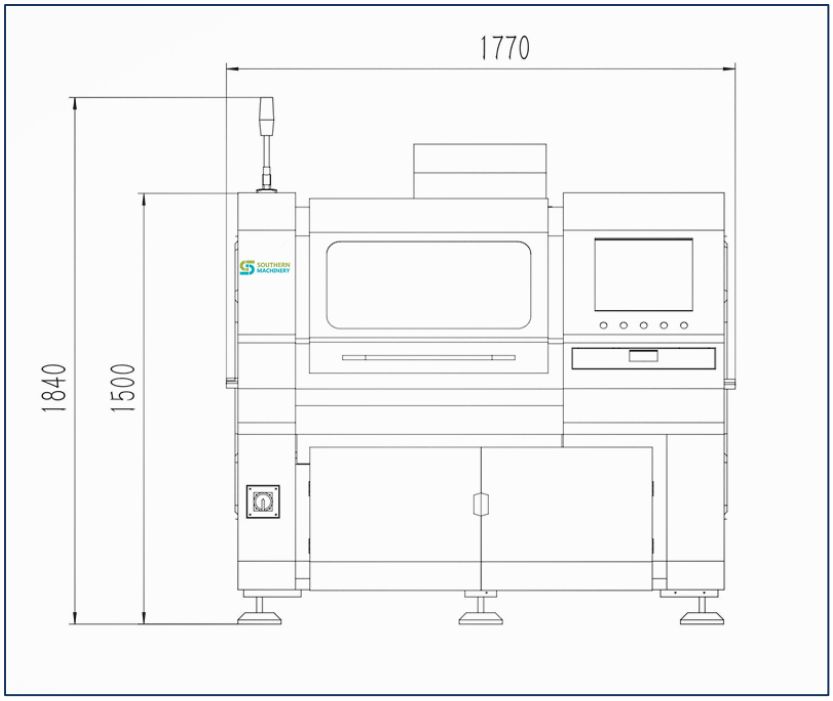
Show that the production data and efficiency have been

8) exited.

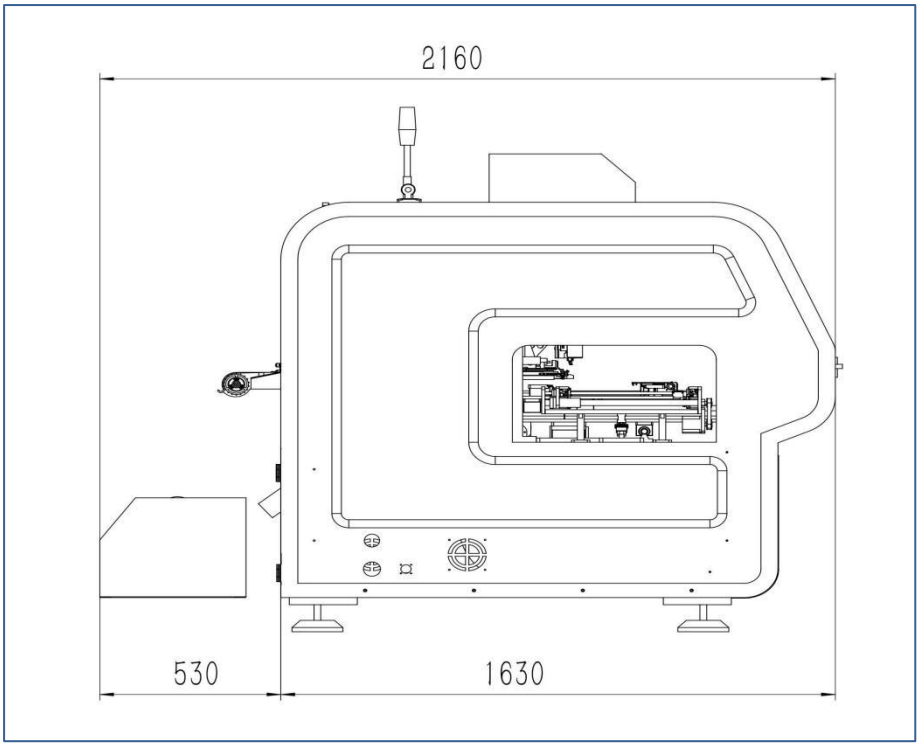
Click exit to exit the program.

Online 3K Vertical Auto Insertion Machine Mechanism Description

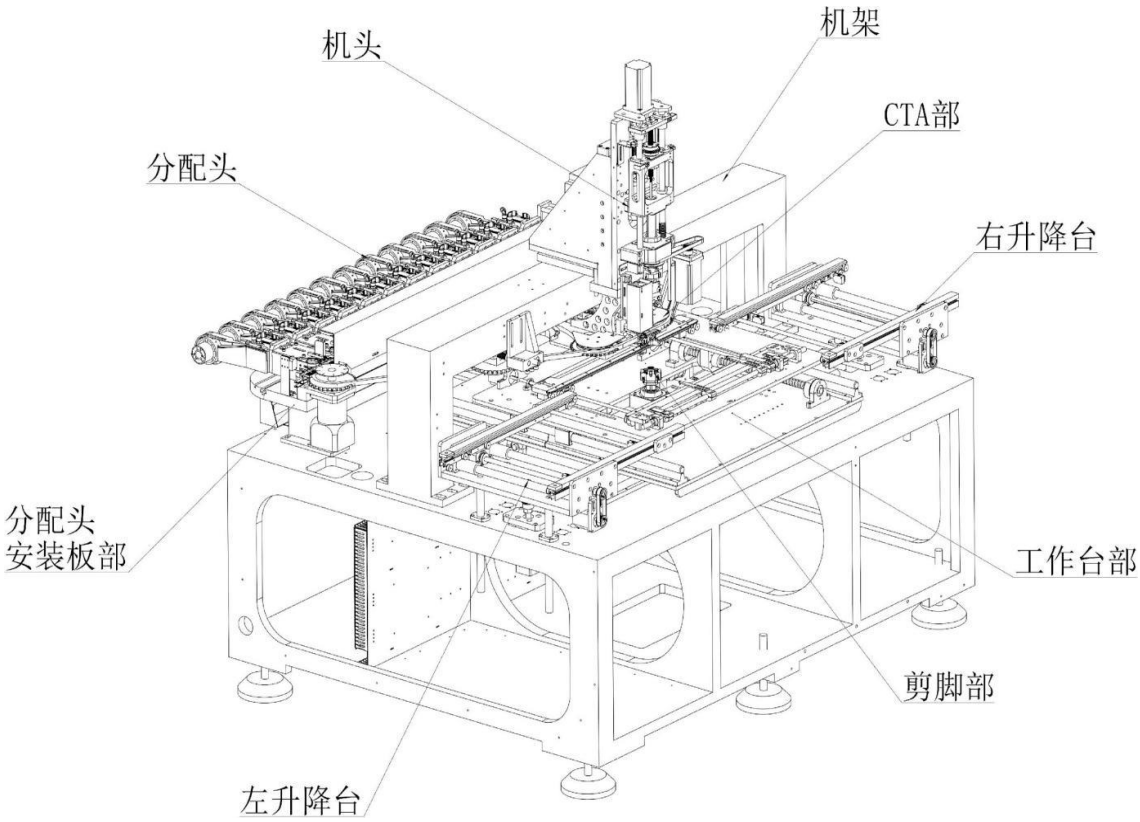
1. 3K vertical machine front view



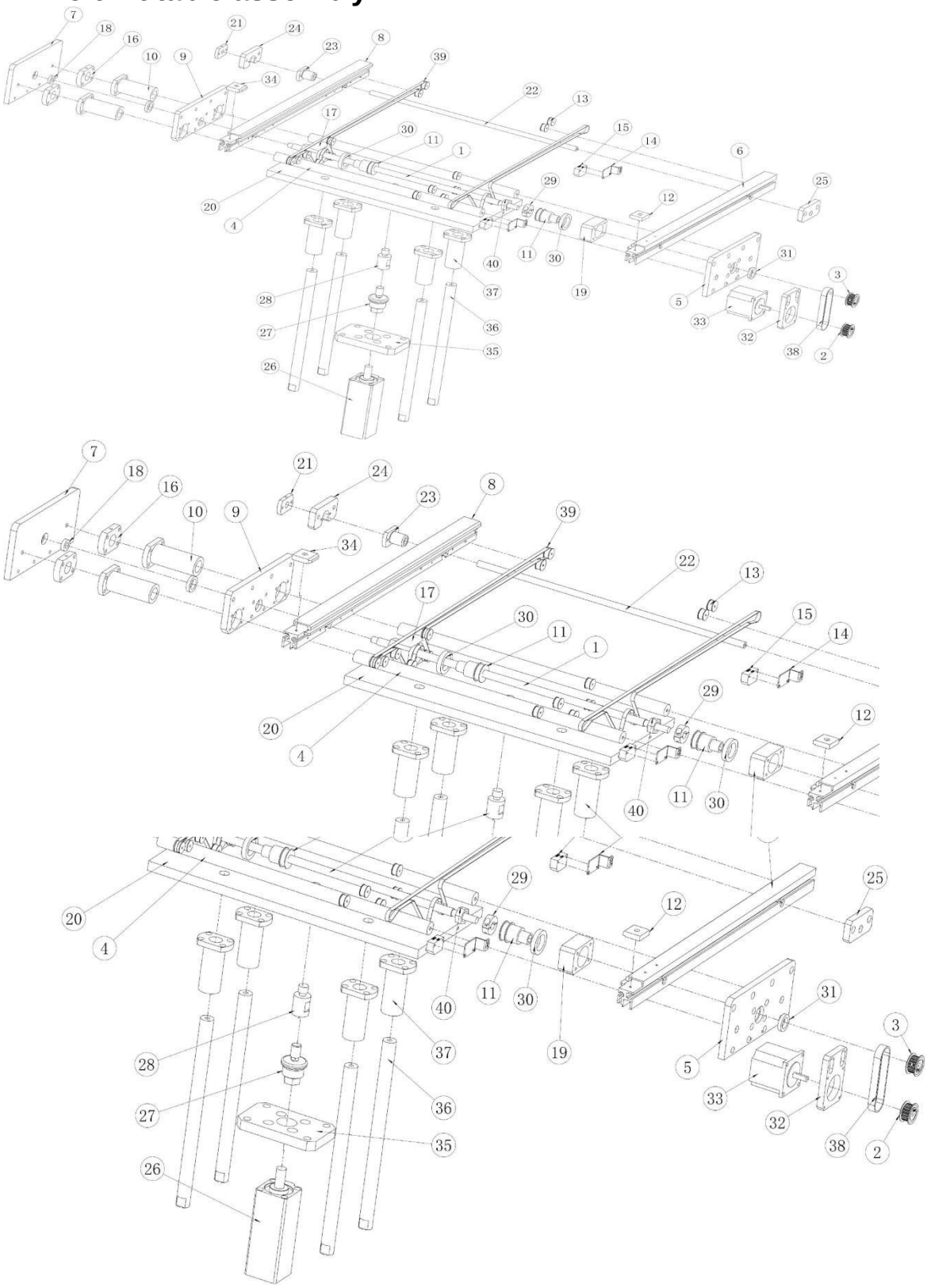
2. 3K vertical machine side view



12 standing Auto Insertion machine assembly



1. Left lift table assembly

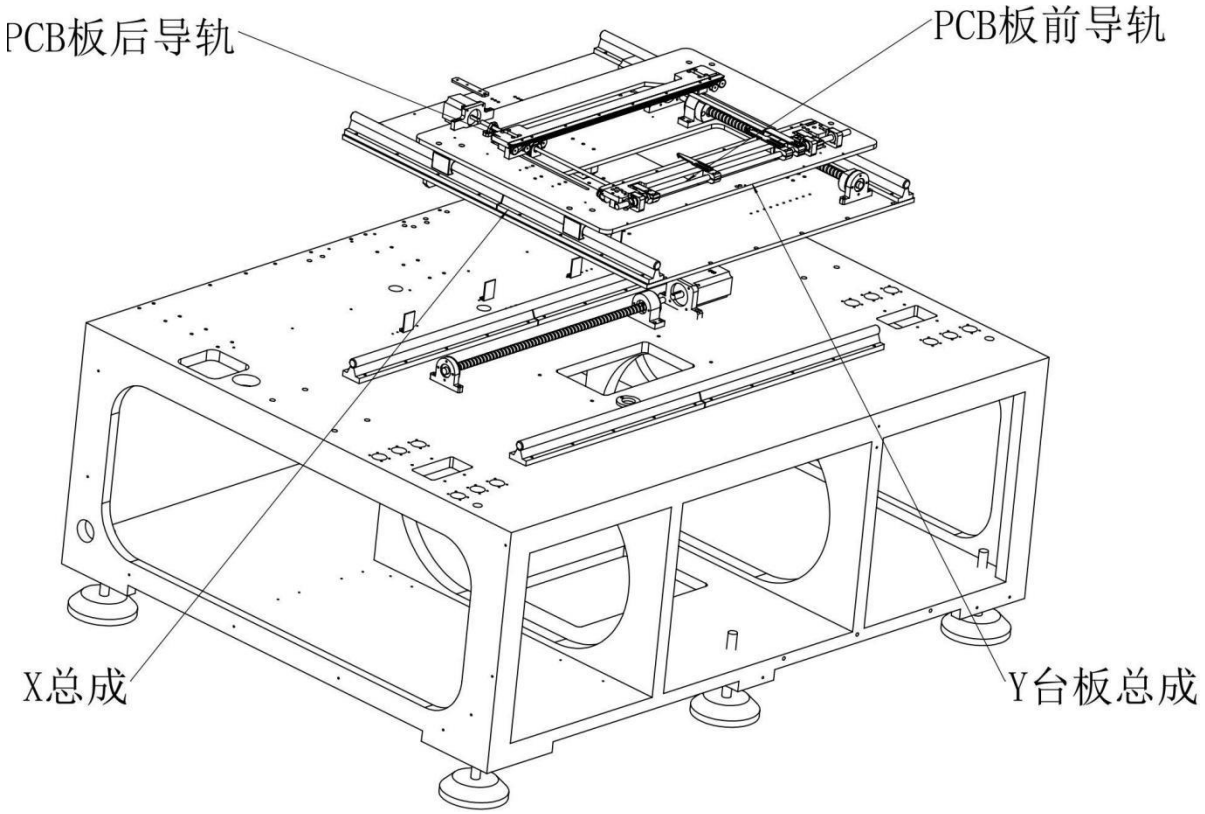


Left lift table assembly material list

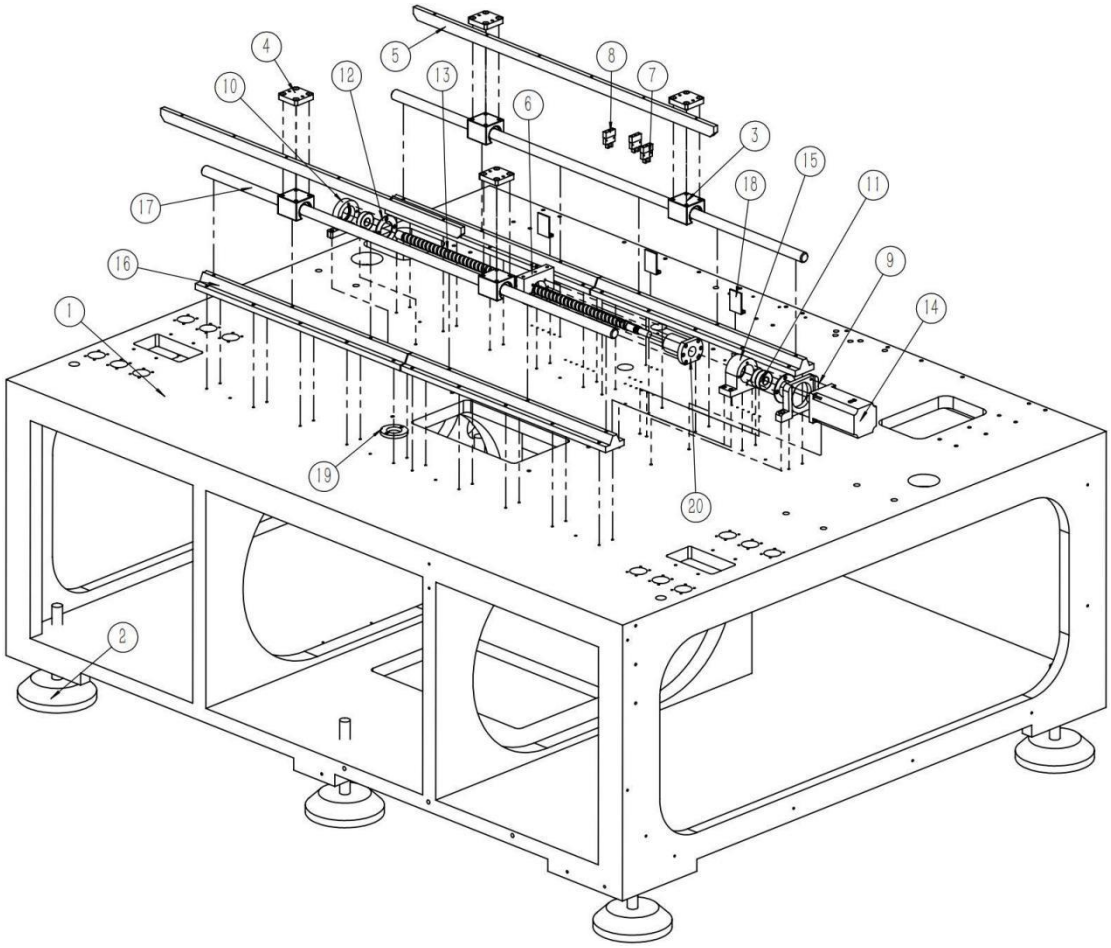
item number	part number	description	quantity	note
1	drive shaft.	3K-12-SJTZB-01	1	
2	IST right synchro wheel-01.	3K-12-SJTZB-02	1	
3	Synchronous wheels.	3K-12-SJTZB-03	1	
4	20optical axis.	3K-12-SJTZB-04	2	
5	left front fixing plate change floweraluminum.	3K-12-SJTZB-05		
6	Left front aluminum.	modification3K-12-SJTZB-06	1	
7 The	left rear aluminum fixed plate is modified.	3K-12-SJTZB-07	1	
8	Left rear aluminum.	modification3K-12-SJTZB-08	1	
9	left width regulating plate.	3K-12-SJTZB-09		
10	flangeLM20UU.	3K-12-SJTZB-10	2	
11	Rear rotating wheel A.	3K-12-SJTZB-11	2	
IST-	12Racesteel	-01. 3K-12-SJTZB-		
13	small pulley.	3K-12-SJTZB-13	15	
IST-	14induction nest	01. 3K-12-SJTZB-14		
15	sensor 02.	3K-12-SJTZB-15	2	
16	IST-flange spacer-01.	3K-12-SJTZB-16	2	
17	pulley block.	3K-12-SJTZB-17	1	
18	bearing61 800.	3K-12-SJTZB-18	2	
19	pulley block B.	3K-12-SJTZB-19	1	
20	Left rail support plate.	3K-12-SJTZB-20	1	
21	Optical axis limit block.	3K-12-SJTZB-21	1	
22	Diameter 10 optical axis.	3K-12-SJTZB-22	1	
23	LHFCD10(LMH6-13)	3K-12-SJTZB-23	1	
24	shaft sleeve fixing plate.	3K-12-SJTZB-24	1	
25	shaft sleeve fixing plate B.	3K-12-SJTZB-25	1	
26	Cylinder SDAS40-75-B.	3K-12-SJTZB-26	1	
27	JS40-14-150(0).	3K-12-SJTZB-27	1	
28	cylinder extension rod.	3K-12-SJTZB-28	1	

29	diameter12ring	holding3K-12-SJTZB-29	1	
30	61805Bearing25 37 7	3K-12-SJTZB-30	2	
31	bearing61803 17 26 5	3K-12-SJTZB-31	2	
32	Motor mount	3K-12-SJTZB-32	1	
33	Honing source motor57BYG250B	3K-12-SJTZB-33	1	
IST-	34Racesteel	-01. 3K-12-SJTZB-		
35	base cylinder mounting plate	3K-12-SJTZB-35	1	
36	20Lifting optical axis	3K-12-SJTZB-36	4	
37	flangeLM20UUY.	3K-12-SJTZB-37	4	
38	belt1-3	3K-12-SJTZB-38	1	
39	belt2left lift table4axis	3K-12-SJTZB-39	2	
40	M16nut	3K-12-SJTZB-40	2	

2. Assembly table



1,X assembly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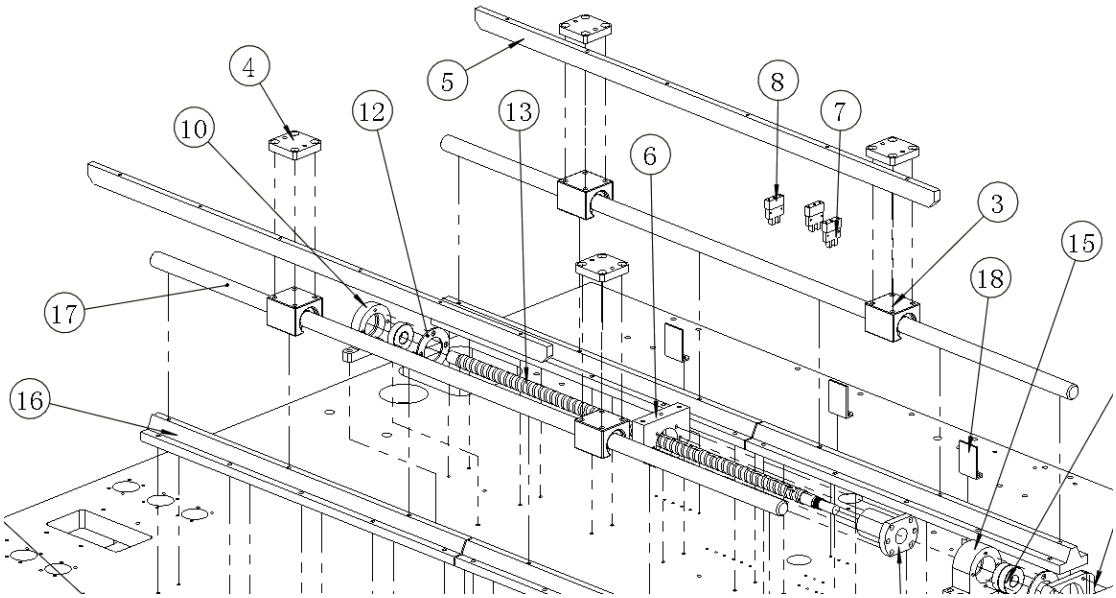
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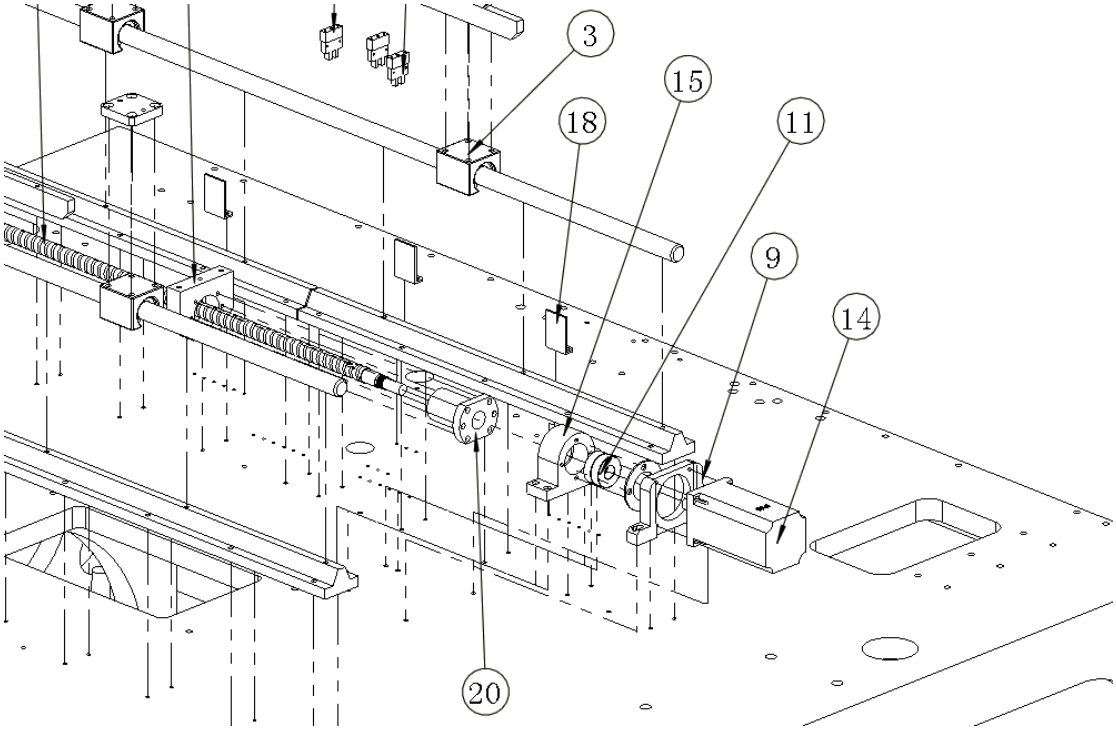
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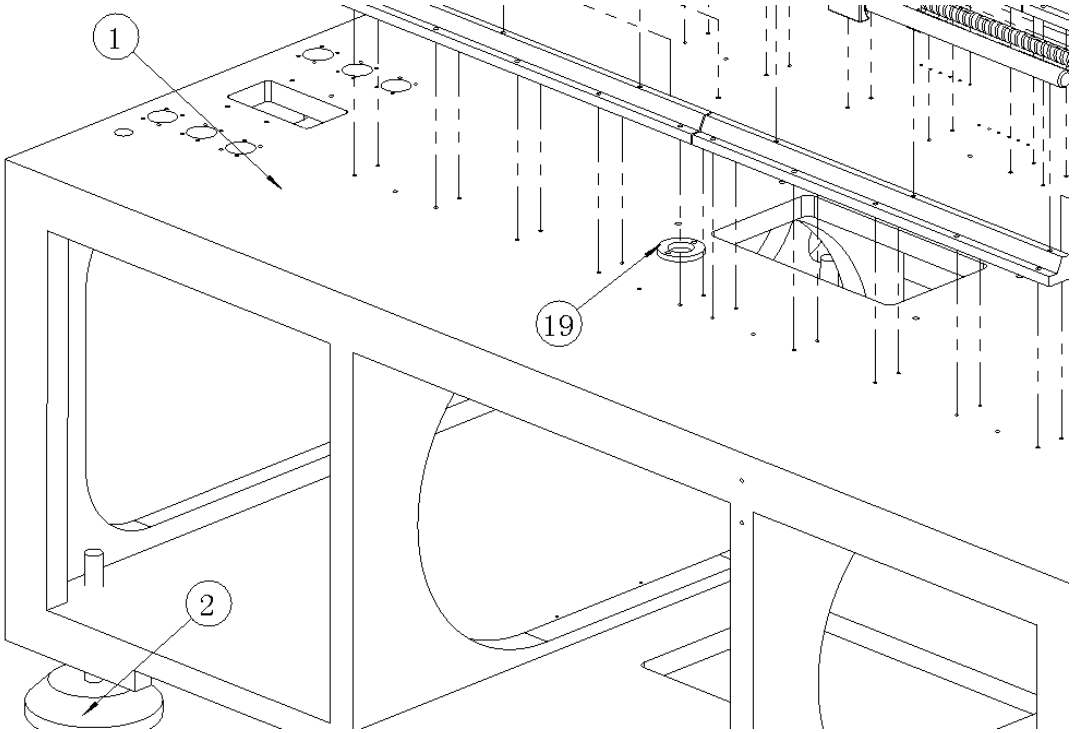
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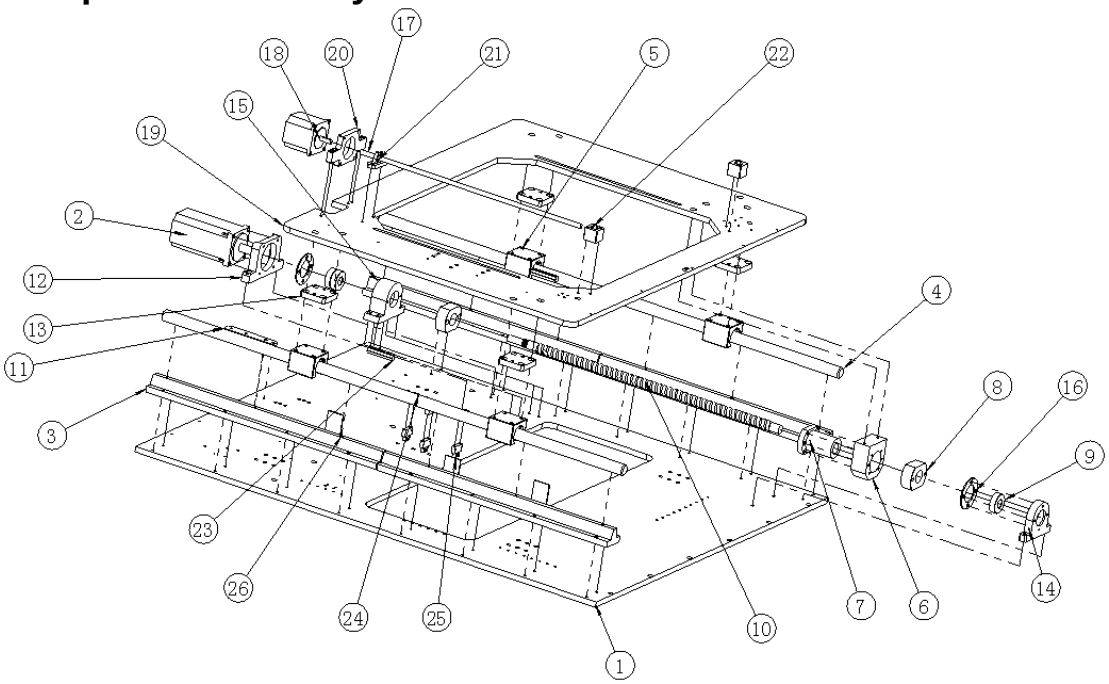
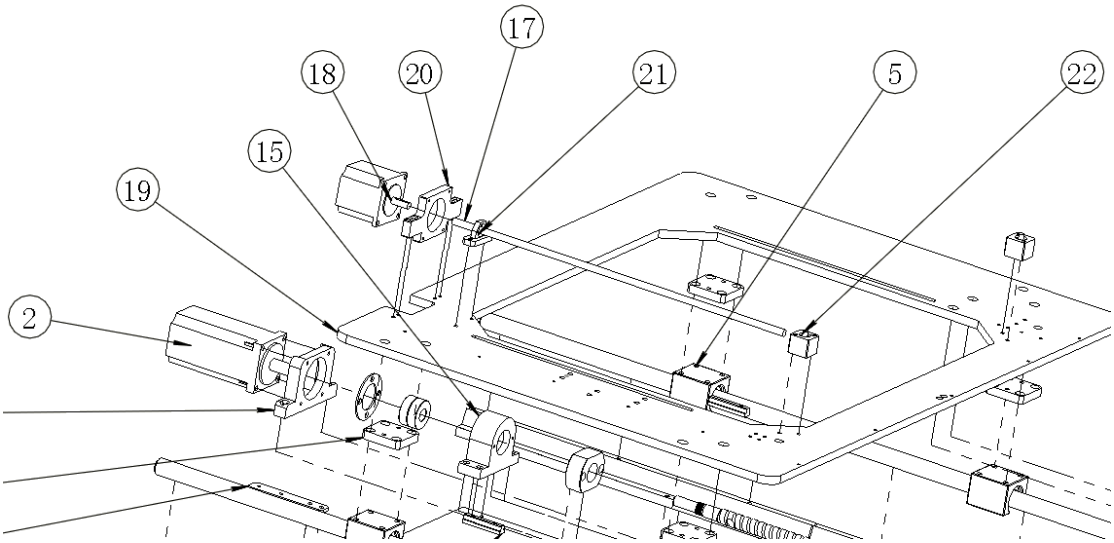
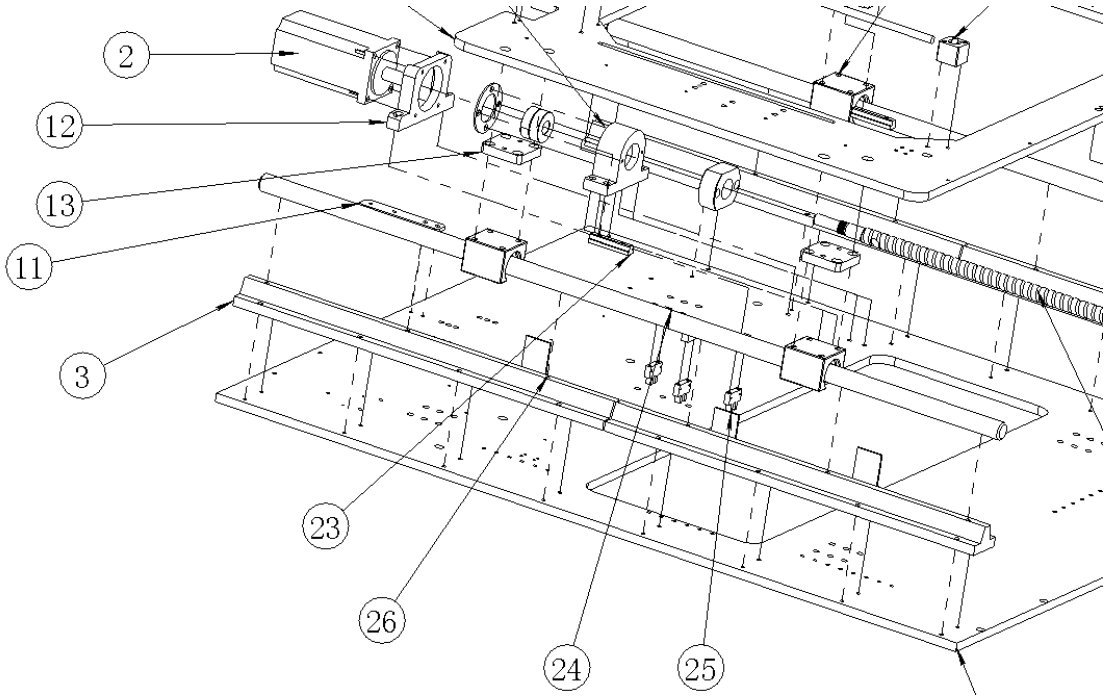
X cartridge BOM

Item Number	Part Number	Description	the number	Remarks
1	base-1updated	1028 3K-12-GZT-XTB		cast iron
2	feet20.	3K-12-GZT -XTB-02	6	standard parts
3	platform slider.	3K-12-GZT-XTB-03	4	
4	3KSslider block	3K-12-GZT-XTB-04	4	
5	Y platen reinforcement plate	3K-12-GZT- XTB-05	2	
6	X Screw nut set.	3K-12-GZT-XTB-06	1	
7	SX670	3K-12-GZT-XTB-07	3	
8	Sensor holder	3K-12-GZT-XTB-08	3	
9	X motor fixing base platform	3K-12-GZT-XTB-		
	screw bearing housing	1. 3K-12-GZT-XTB		
	bearing	6202. 3K-12-GZT-XTB		
	bearing cap	3K -12-GZT-XTB-12	2	
13	3KSXscrew	3K-12-GZT-XTB-13	1	
14	400Wmotor.	3K-12-GZT-XTB-14	1	
15	IST-X bearing holder.	3K-12-GZT -XTB-15	1	
16	X-ray axis bracket	3K-12-GZT-XTB-16	2	
17	20Hard optical axis1	3K-12-GZT-XTB-17	2	
18	XY limit sensor	3K-12-GZT-XTB- 18	3	
19	Black Teflon	3K-12-GZT-XTB-19	1	
20	sfs2010-3.8nut.	3K-12-GZT-XTB-20	1	

2. Y-platen assembly



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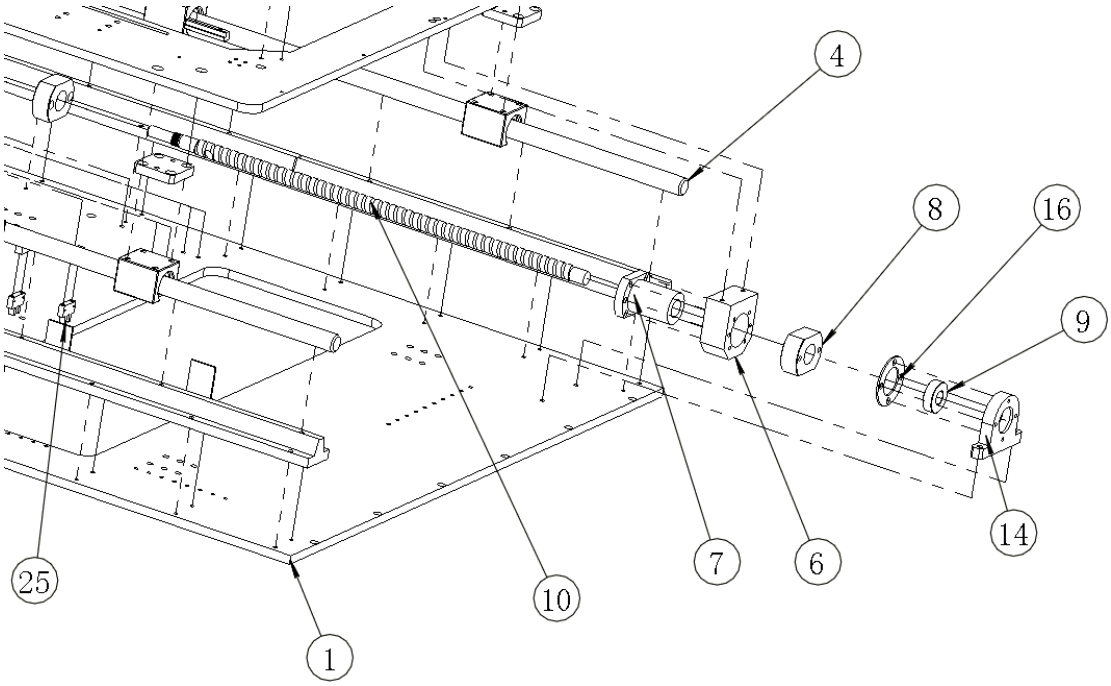
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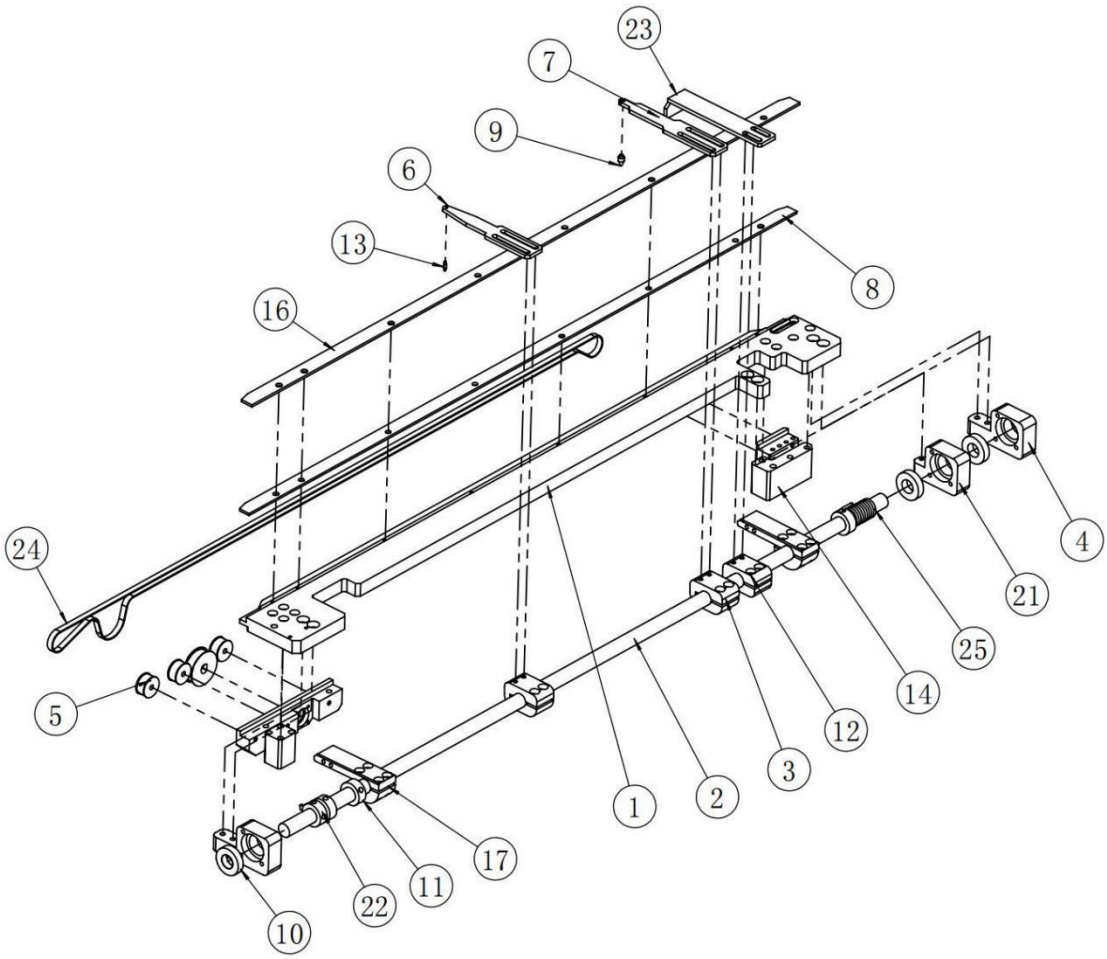
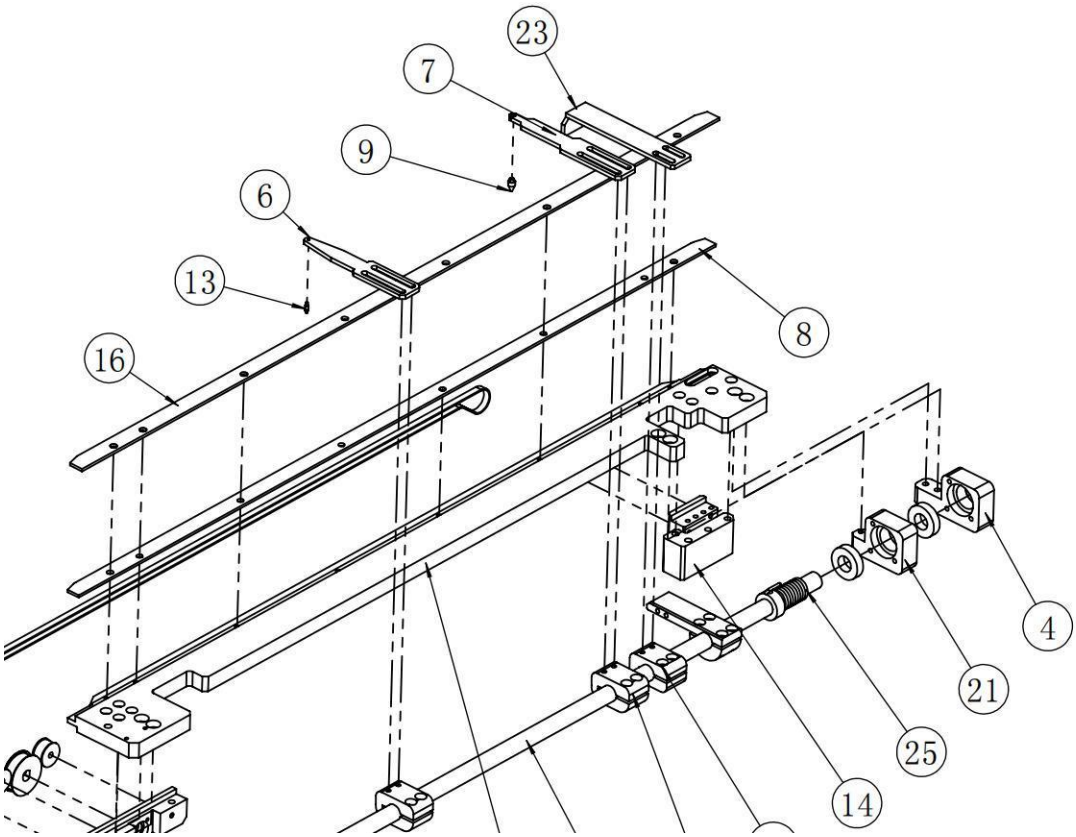
Y-platen assembly material list

item number	Part Number	Description	Quantity	Quantity
1	3KSYworktable	3K-12-GZT-YTB-01	1	
2	400Wmotor.	3K-12-GZT-YTB-02	1	
3	rail2base	3K-12-GZT-YTB-03	2	
4	rail2	3K-12-GZT-YTB-04	2	
5	Platform slider.	3K-12-GZT-YTB-05	4	
6	Y screw nut sleeve	3K-12-GZT-YTB-06	1	
7	sfs2010-3.8nut.	3K- 12-GZT-YTB-07	1	
8	Y buffer glue.	3K-12-GZT-YTB-08	2	
9	bearing6202.	3K-12-GZT-YTB-09	3	
10	Y platform screw	3K-12-GZT-YTB- 10	1	
11	Drag chain mounting plate	3K-12-GZT-YTB-11	1	
12	X platform motor fixing seat	3K-12-GZT-YTB-12	1	
13	3KSslider block	3K-12-GZT-YTB-13	4	
1 4	X screw bearing seat1.	3K-12-GZT-YTB-14	1	
15	IST-X bearing holder.	3K-12-GZT-YTB-15	1	
16	bearing cap	3K-12-GZT-YTB-16	2	
17	Transmission optical axis 8	3K-12-GZT-YTB-17	1	
18	honing motor57BYG250B	3K-12-GZT-YTB-18	1	
19	3KStable plate	3K-12-GZT-YTB-19	1	
20	motor fixing plate	3K- 12-GZT-YTB-20	1	
21	Belt bearing mounting bracket	3K-12-GZT-YTB-21	1	
22	SDA12-5	3K-12-GZT-YTB-22	2	
23	Width adjustment nut bar	3K-12-GZT-YTB- 23	2	
24	Sensor holder	3K-12-GZT-YTB-24	3	
25	SX670	3K-12-GZT-YTB-25	3	
26	XY limit sensor	3K-12-GZT-YTB-26	3	

3. Front rail assembly

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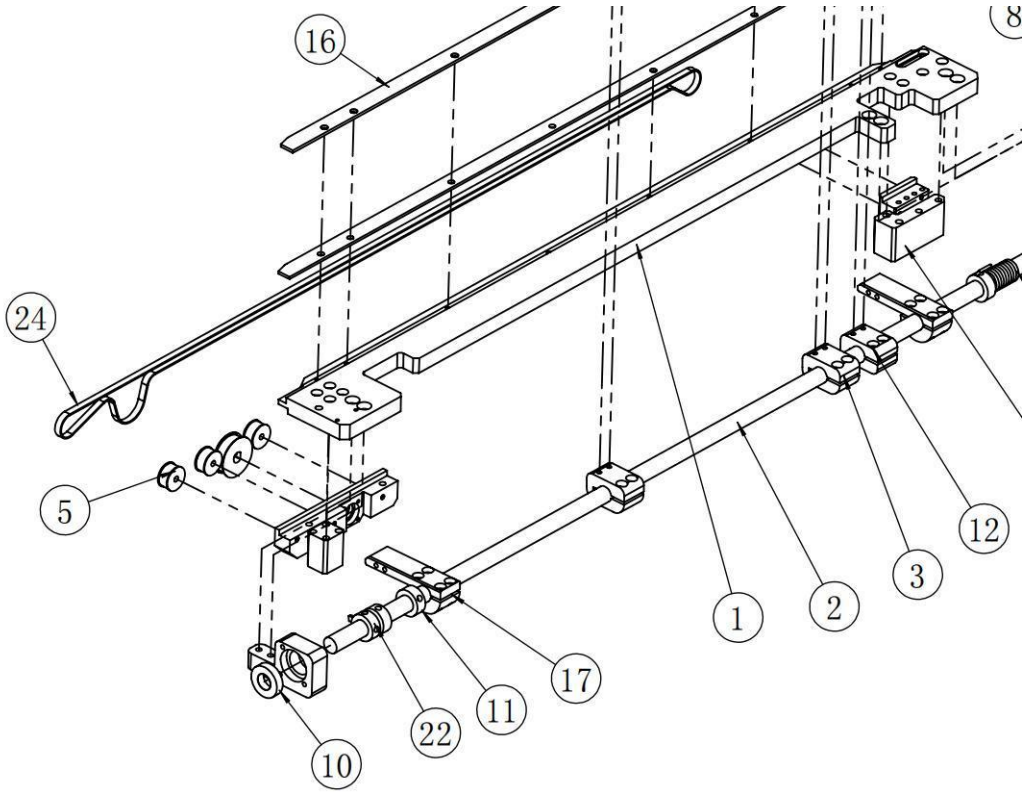
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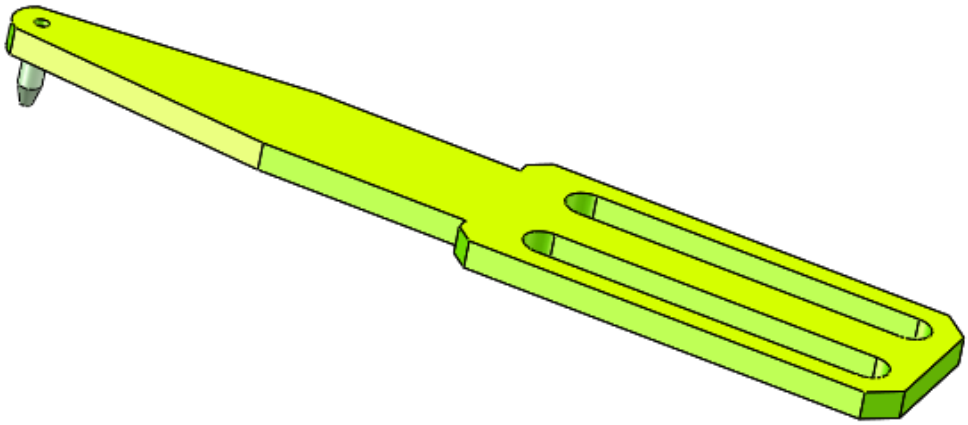
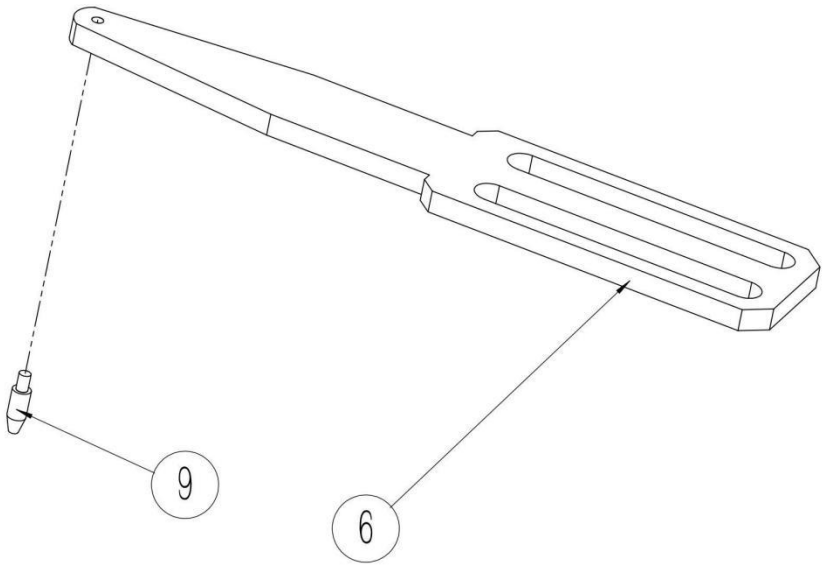
Front rail material list

item number	part number	description	quantity	remarks
1	front guide plate A..	3K-12-GZT-QDG-01	1	
	212Axis	.. 3K-12-GZT-QDG		
3	clamp block4..	3K-12-GZT-QDG-03	2	
4	clamp block B:	3K-12-GZT-QDG-04	2	
5	small pulley	.. 3K-12-GZT-QDG		
6	positioning plate..aperture	09 3K-12-GZT-QDG		
7	longer section positioning piece	110 3K-12-GZT-QDG		
	Stainless steel8	..09 3K-12-GZT-QDG		
9	Positioning PIN--Universal	3K-12-GZT-QDG-09	1	
10	bearing6901..09	3K-12-GZT-QDG-10	3	
11	ring:Holding09	3K-12-GZT-QDG-11	3	
12	IST-Clamping blockAA..09	3K-12-GZT-QDG-12	1	
13	Turntable positioningPIN..09	3K-12-GZT-QDG-13	1	
14	Turntable track block.	3K-12-GZT-QDG-14	1	
15	Turntable track block B.	3K-12-GZT-QDG-15	1	
16	lower stainless steel plate A.	3K-12-GZT-QDG-16	1	
17	clamp block:Cocked09	3K-12-GZT-QDG-17	2	
18	Front belt pressure wheel mounting plateB.09	3K-12-GZT-QDG-18	1	
19	Small pulley	.. 3K-12-GZT-QDG		
20	Belt compression mounting plateB.09	3K-12-GZT-QDG-20	1	
21	clamp block2	3K-12-GZT-QDG-21	1	
22	Positioning shaft holding ring(1)	3K-12-GZT-QDG-22	1	
23	baffle block	3K-12-GZT-QDG-23	1	
24	Front rail belt-1	3K-12-GZT-QDG-24	1	
25	torsion spring	3K-12-GZT-QDG-25	1	

PCB board positioning PIN-universal



positioning PIN-universal exploded drawing

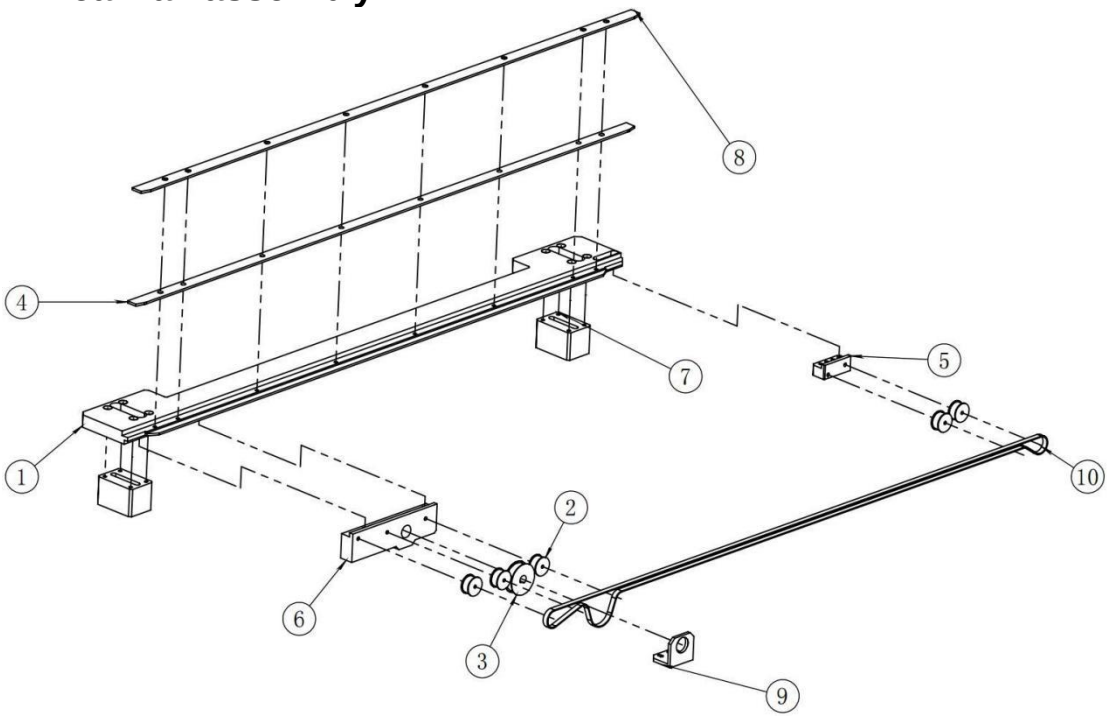


positioning PIN-universal bill of materials

Item number	Part number	Description	Quantity	Remarks
6	Positioning plate hole	3K-12-GZT-QDG-06	1	
9	Turntable positioning PIN	3K-12-GZT-QDG-07	1	2.0-5.5

Remarks: This model has an integrated type (positioning plate and positioning PIN integrated)

4. Rear rail assembly

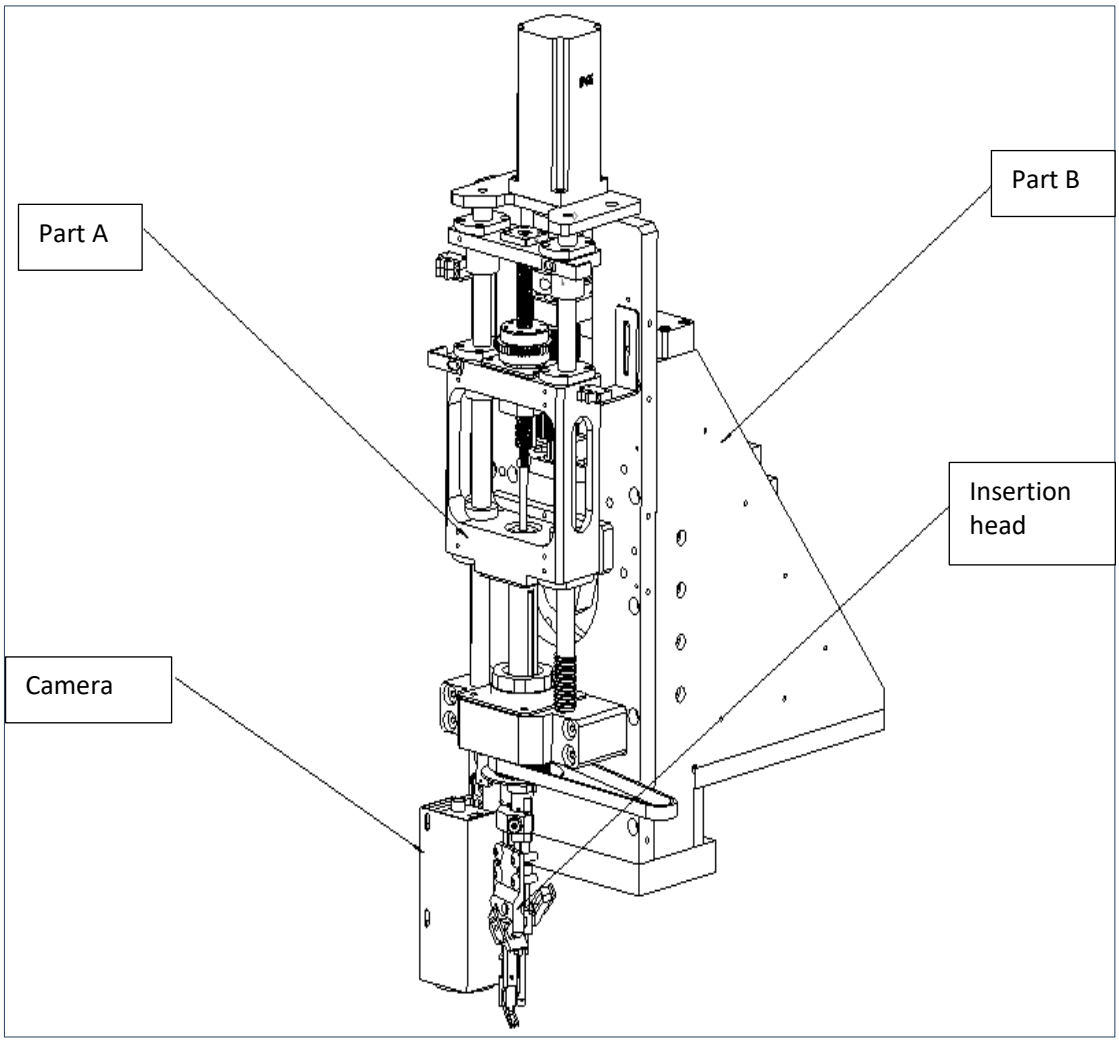


Rear rail material list

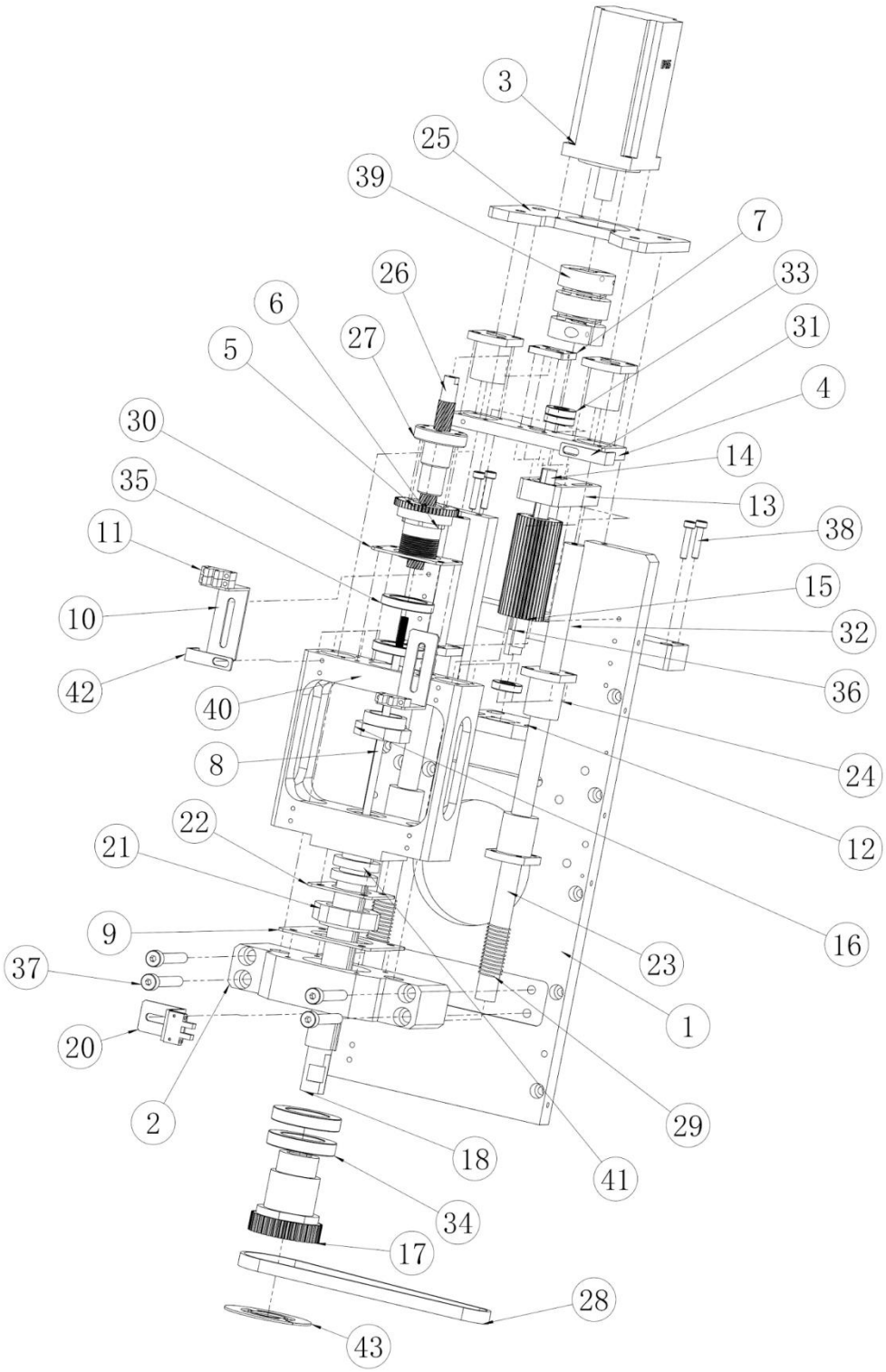
item number	part number	Description	Quantity	Remarks
1	Rear guide plateA.09	3K-12-GZT-HDG-01	1	
2	small pulley.09	3K-12-GZT-HDG-02	5	
3	small pulley	3K-12-GZT-HDG		
4	lower stainless steel plates.09	3K-12-GZT-HDG-04	1	
5	Belt compression mounting plateB.09	3K-12-GZT-HDG-05	1	

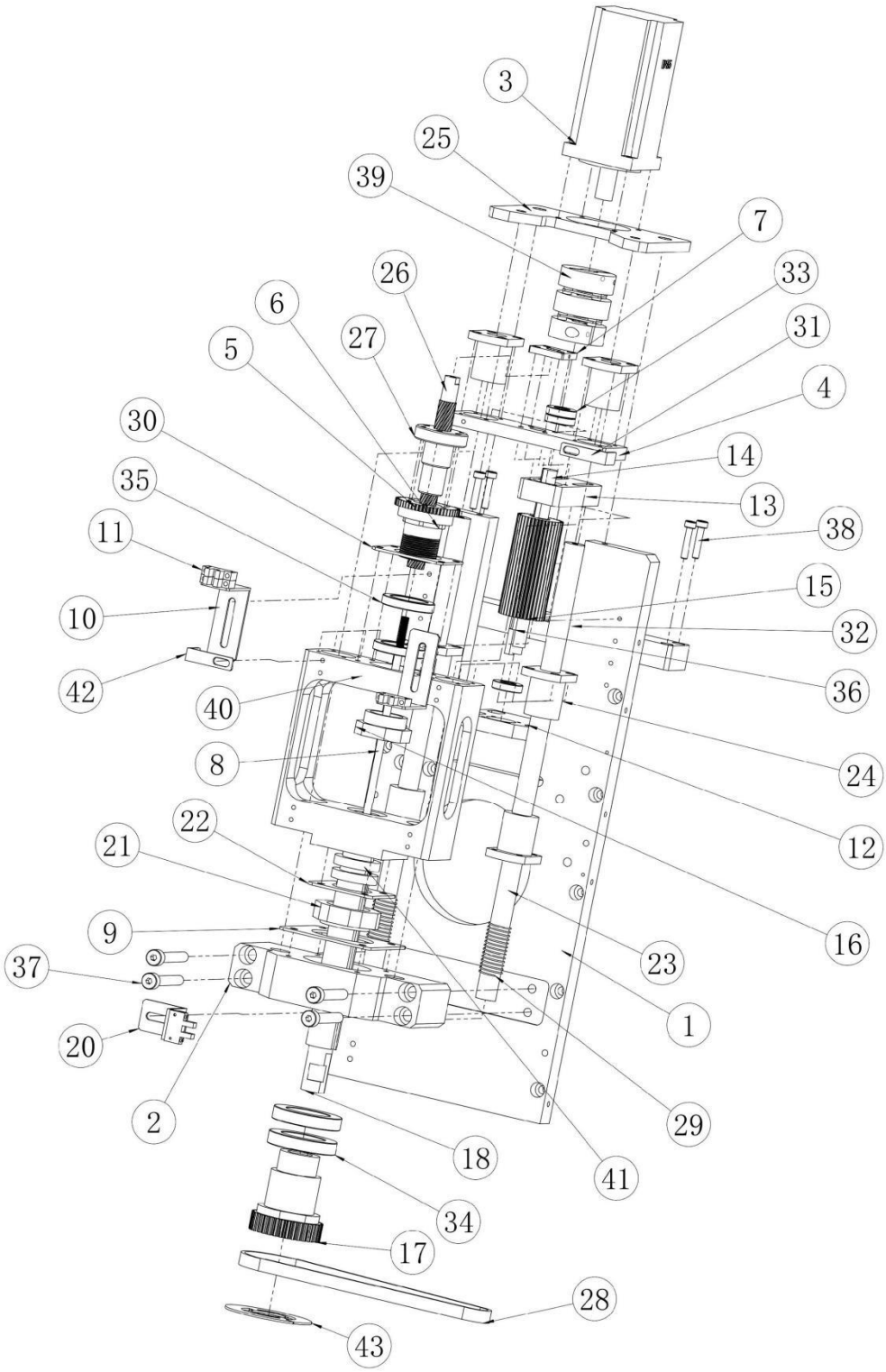
6	Belt pressure roller mounting plateB.09	3K-12-GZT-HDG-06	1	
7	slide locking block	B.09 3K-12-GZT-HDG		
8	lower stainless steel plate A.	3K-12-GZT-HDG-08	1	
9	Active wheel limit piece	3K-12-GZT-HDG-09	1	
10	Rear rail belt-1	3K-12-GZT-HDG-10	1	

3. The head assembly



(1)The head becomes part A

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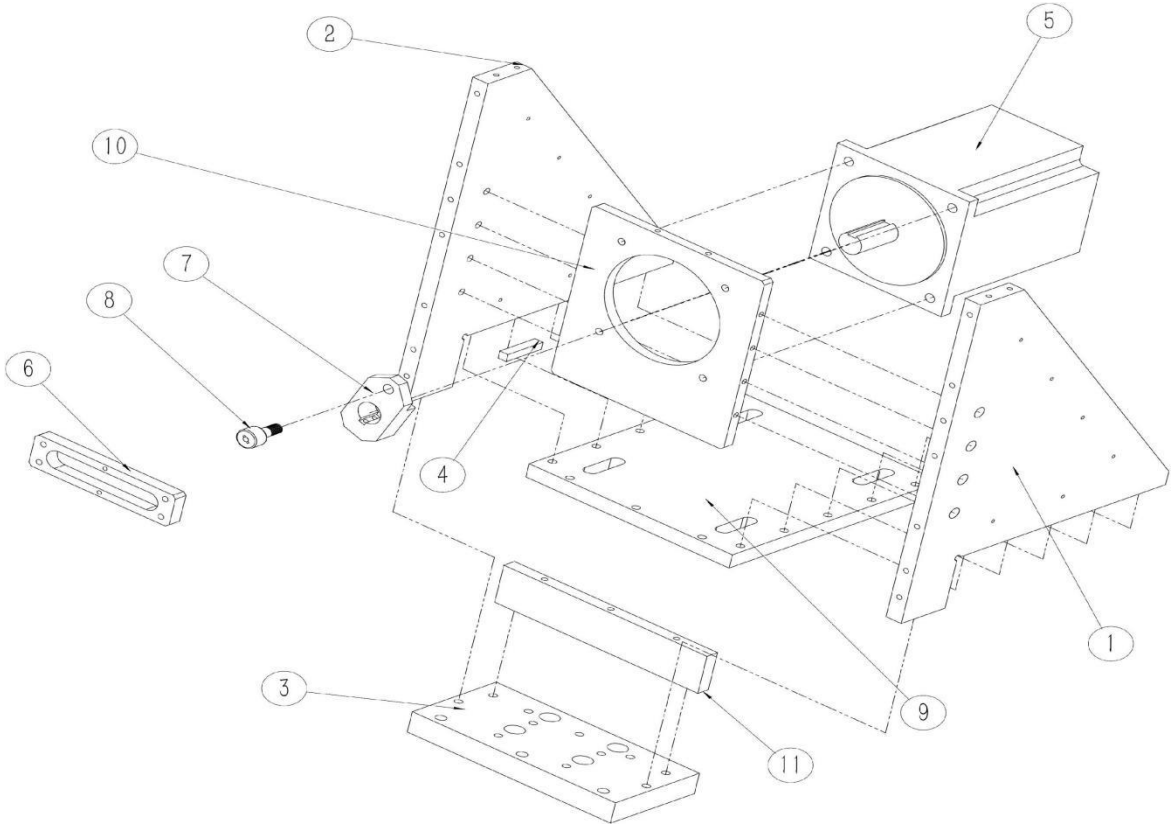
Head Assembly Part A Material List

Item Number	Part Number	Description	Quantity	Remarks
1	Head mounting body	3K-12-TB-ABF-01	1	
2	Bearing seat	3K-12-TB-ABF-02	1	
3	400Wmotor	3K-12 -TB-ABF-03	1	
4	Pushing screw fixing plate	3K-12-TB-ABF-04	1	
5	Auto Insertion head transmission gear2	3K-12-TB-ABF-05	1	
6	Pushing screw seat	3K-12- TB-ABF-06	1	
7	Pushing screw fixing block	3K-12-TB-ABF-07	1	
8	Pressing rod	3K-12-TB-ABF-08	1	
9	Auto Insertion head bearing cover1	3K-12-TB- ABF-09	1	
10	nip axis induced holder	3K-12-TB-ABF-10	2	
11	SX670	3800-12-TB-ABF-11	4	
12	nip gear bearing seat	3K-12-TB-ABF-12	1	
13	pressure Material wheel mounting seat	3K-12-TB-ABF-13	1	
14	Gear shaft	3K-12-TB-ABF-14	1	
15	Auto Insertion head drive gear1	3K-12-TB-ABF-15	1	
16	Pushing screw seat cover	3K-12-TB-ABF-16	1	
17	Rotating pulley	3K-12-TB-ABF-17	1	
18	Auto Insertion shaft	3K-12-TB-ABF-18	1	
19	deep groove ball bearings gb	3K-12-TB-ABF- 19	1	
20	Sensing sheet	3K-12-TB-ABF-20	1	
21	M35X1.5	3K-12-TB-ABF-21	1	
22	Auto Insertion head bearing cover2	3K-12-TB-ABF-22	1	
23	16Optical axis	3K-12-TB-ABF-23	2	
24	LMH16	3K-12-TB-ABF-24	6	
25	16-axis positioning plate	3K-12-TB-ABF-25	1	
26	14-tooth screw	3K-12-TB-ABF- 26	1	
27	14tooth screw seat	3K-12-TB-ABF-27	1	
28	belt180XL-10	3K-12-TB-ABF-28	1	

29	spring (18-1.1-6-100)	3K-12-TB- ABF-29	2	
30	Auto Insertion head bearing cover4	3K-12-TB-ABF-30	1	
31	Pressing shaft induction plate	3K-12-TB-ABF-31	1	
32	Pressing bearing fixing plate	3K-12-TB-ABF -32	1	
33	bearing61901	3K-12-TB-ABF-33	3	
34	61907	3K-12-TB-ABF-34	2	
35	bearing61806	3K-12-TB-ABF-35	2	
36	keys (5-5-30)	3K-12 -TB-ABF-36	1	
37	M8X55screw	3K-12-TB-ABF-37	4	
38	M5X25screw	3K-12-TB-ABF-38	4	
39	Platform motor coupling (14-12).	3K-12-TB -ABF-39	1	
40	Slider combination	3K-12-TB-ABF-40	1	
41	61805	3K-12-TB-ABF-41	3	
42	Pressing axis induction sheet left	3K-12-TB-ABF-42	1	
43	head Part steering induction plate	3K-12-TB-ABF-43	1	

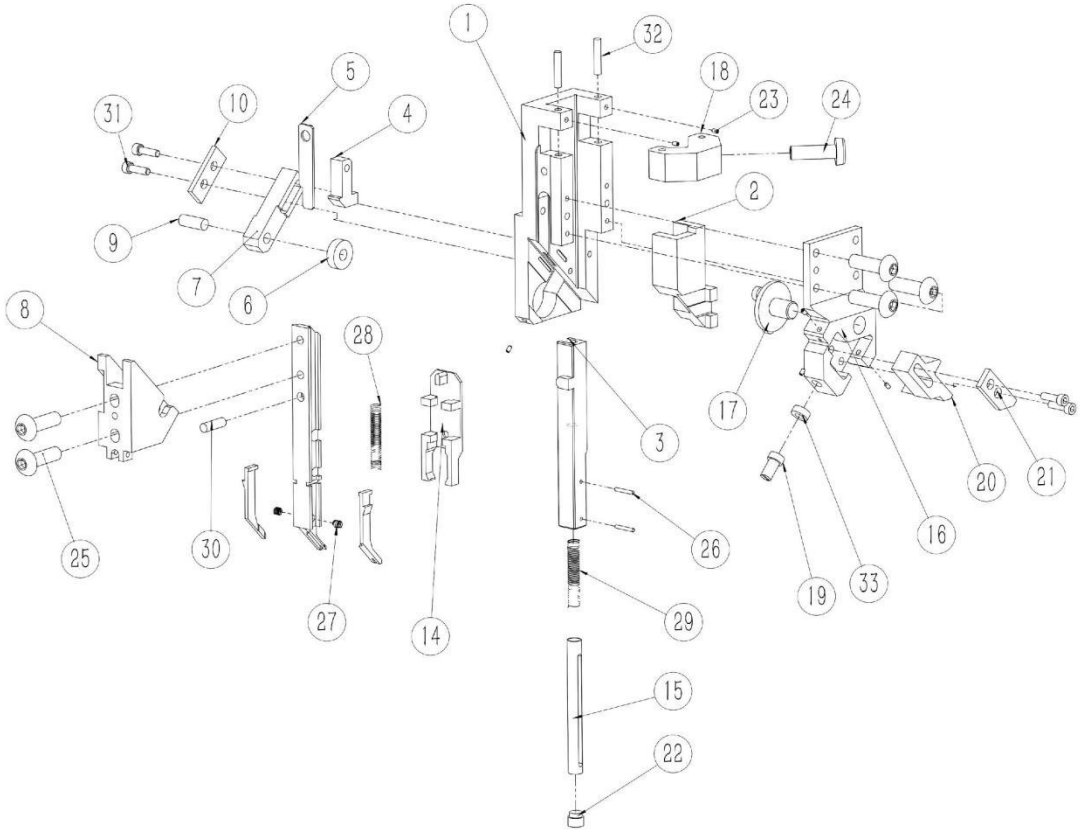
(2) Head assembly Part B



Head assembly-Part B material list

Item number	Part number	Description	Quantity	Remarks
1	Head side plate	3K-12-TB- BBF-01	1	
2	Mirror head side plate	3K-12-TB-BBF-02	1	
3	CTA combination connecting plate	3K-12-TB-BBF-03	1	
4	keys (8-8-40)	3K-12-TB -BBF-04	1	
5	Taiwan up to1500Wmotor	3K-12-TB-BBF-05	1	
6	track groove	3K-12-TB-BBF-06	1	
7	Swing arm	3K-12-TB-BBF-07	1	
8	CR12V.	3K -12-TB-BBF-08	1	
9	Head mounting plate	3K-12-TB-BBF-09	1	
10	1500WDelta motor seat	3K-12-TB-BBF-10	1	
11	Head reinforcement plate	3K-12- TB-BBF-11	1	

(3) Auto Insertion head exploded view

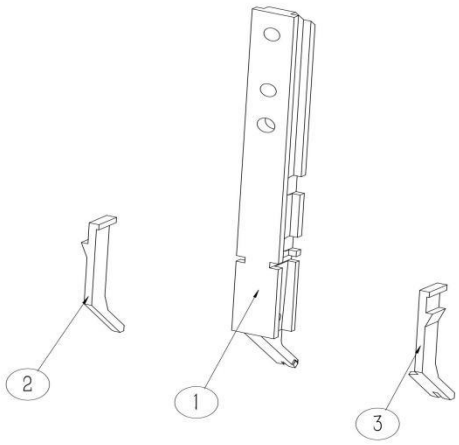


Auto Insertion head material list

Item No.	Part number	Description	Quantity	Remarks
1	Auto Insertion head body	3K-12-TB-CJT-01	1	
2	shaped slider	Special-3K-12-TB-CJT-02	1	
3	fixing block	Mandrel3K-12-TB-CJT-03	1	
4	Rotating block1	3K-12-TB-CJT-04	1	
5	shrapnel	3K-12-TB-CJT-05	1	
6	bearing619-5	3K-12-TB-CJT-06	1	
7	Slider2A	3K-12-TB-CJT-07	1	
8	triangle slider	3K-12-TB-CJT-08	1	
9	pin2	3K-12-TB-CJT-09	1	
10	spacer1	3K-12-TB-CJT-10	1	
11				See the main mainassembly
12				See the main mainassembly
13				See the main mainassembly
14	Grabgrabgrab Left and right side grab fixed block	3K-12-TB-CJT-14	1	
15	ejector rod	3K-12-TB-CJT-15	1	
16	slider1	3K-12-TB-CJT-16	1	
17	Rotating wheel	3K-12-TB-CJT-17	1	
18	Auto Insertion headblock	holding3K-12-TB-CJT-18	1	
19	small roller	3K-12-TB-CJT-19	1	
20	spacer	3K-12-TB-CJT-20	1	
21	Auto Insertion headblock	pressure3K-12-TB-CJT-21	1	
22	buffer glue	3K-12-TB-CJT-22	1	
23	M5x20Kimi screw	3K-12-TB-CJT-23	6	
24	M6x20Kimi screw	3K-12-TB-CJT-24	1	
25	M4x20hexagon socket screw	3K-12-TB-CJT-25	6	
26	1.5pin	3K-12-TB-CJT-26	2	
27	small spring1	3K-12-TB-CJT-27	2	
28	small spring2	3K-12-TB-CJT-28	1	
29	small spring3	3K-12-TB-CJT-29	2	

30	4pins	3K-12-TB-CJT-30	1	
31	M3screwx10	3K-12-TB-CJT-31	4	
32	pin2(3.175)	3K-12-TB-CJT-32	2	
33	Small pad wheel	3K-12-TB-CJT-33gripMain gripping	1	

Exploded view and material list of main assembly specifications:
10.0 Exploded view of main gripping device (including spacing 7.5; 5.0; 2.5)



10.0 device material list (including Spacing 7.5; 5.0; 2.5)

Item number	Part number	Description	Quantity	Remarks
1	bar	Main3K-12-TB-ZCT-01-10.0	1	
2	Grab Left grab	3K-12-TB-ZCT-02-10.0	1	
3	Right grab	3K- 12-TB-ZCT-03-10.0	1	

7.5device material list (including spacing 5.0; 2.5)

Item No.	Part No.	Description	Quantity	Remarks
1	7.5lever	MainMain3K-12-TB-ZCT-01-7.5	1	
2	7.5grippinggrippingLeft gripping	3K-12-TB-ZCT- 02-7.5	1	
3	7.5Right grasp	3K-12-TB-ZCT-03-7.5	1	

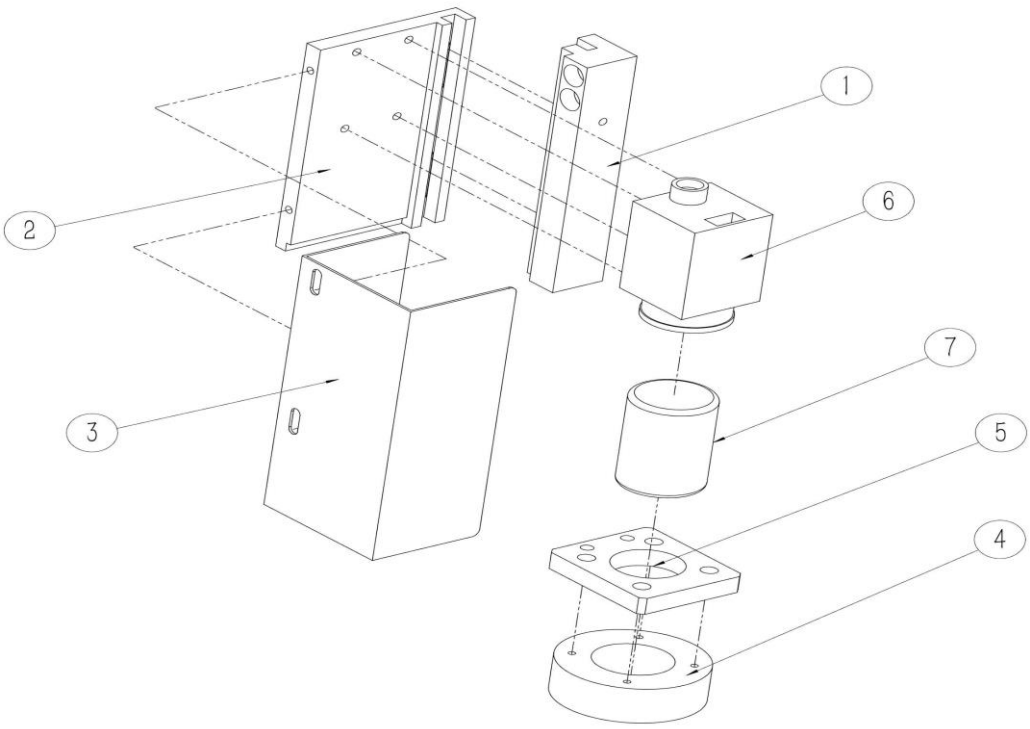
5.0device material list (including spacing 2.5)

Item No.	Part No.	Description	Quantity	Remarks
1	5.0lever	Main gripping Main gripping3K-12-TB-ZCT-01-5.0	1	
2	5.0Grab the left side	3K-12-TB-ZCT-02-5.0	1	
3	5.0Grab the right side	3K-12-TB-ZCT-03-5.0	1	

3.5device material list (including spacing 2.5; 5.0)

Item No.	Part No.	Description	Quantity	Remarks
1	3.5lever	Main gripping Main gripping3K-12-TB-ZCT-01-3.5	1	
2	3.5Grab the left side	3K-12-TB-ZCT-02-3.5	1	
3	3.5Grab the right side	3K-12-TB-ZCT-03-3.5	1	

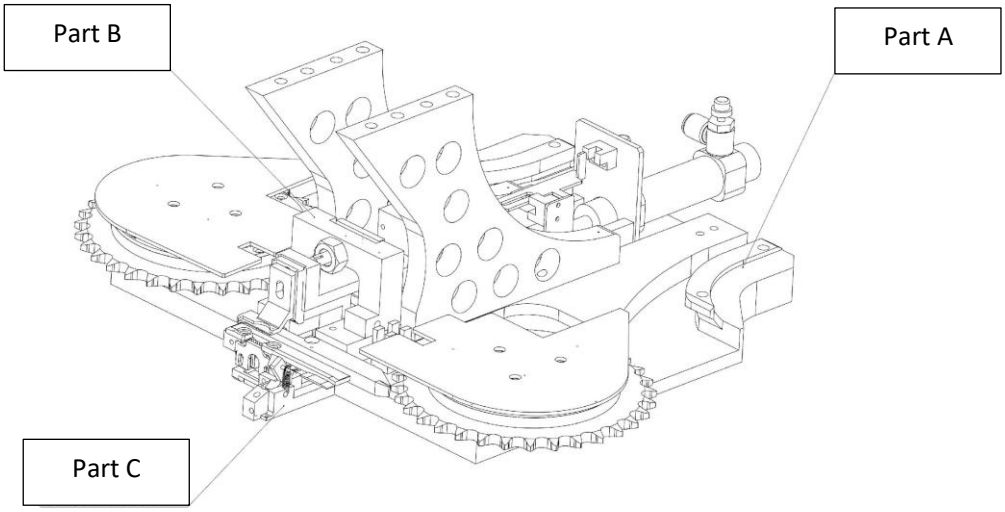
(4) Exploded view of the camera



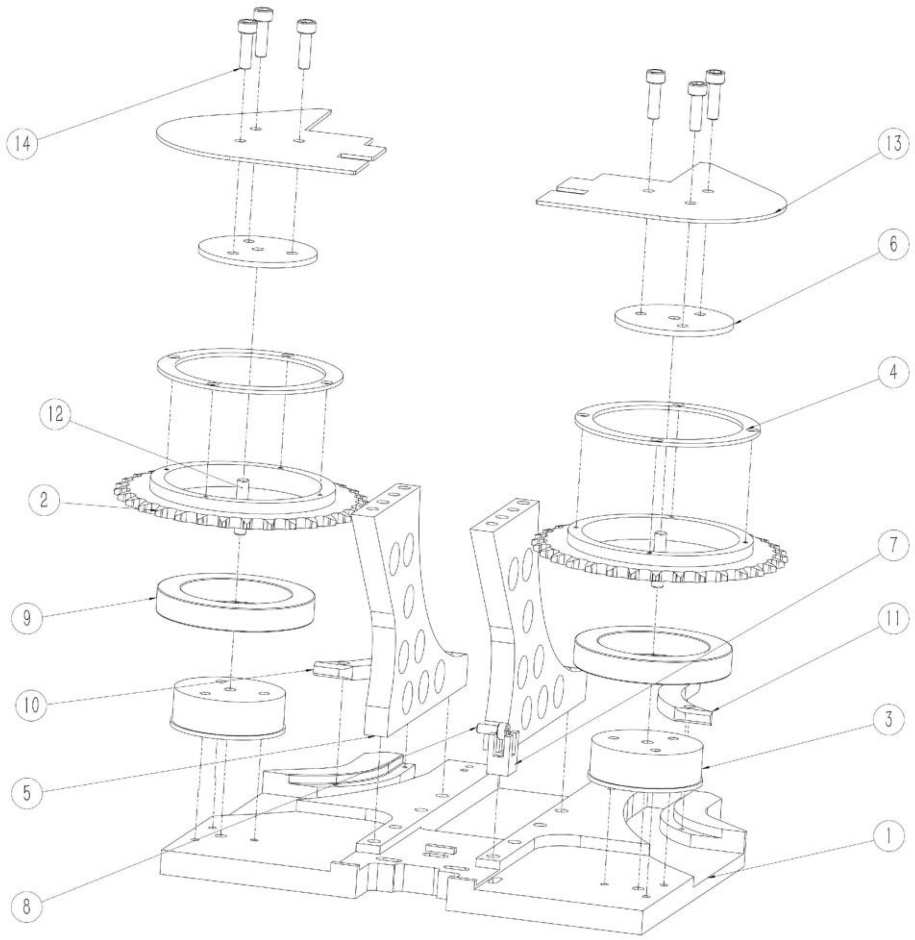
Part of the material list of the camera part

item number	part number	description	quantity	remarks
1	scanning head fixing block	3K-12-TB-CJT-01	1	
2	Scanning head fixed vertical plate	3K-12-TB-CJT-02	1	
3	Scan head cover	3K-12-TB-CJT-		
4	camera circle	3K-12-TB-CJT-04	1	
5	Camera light mounting plate1	3K-12-TB-CJT-05	1	
6	small camera	2016. 3K-12-TB-CJT		
7	Camera head2016.	3K-12-TB-CJT-07	1	

4. CTA assembly



CTA-A part exploded view

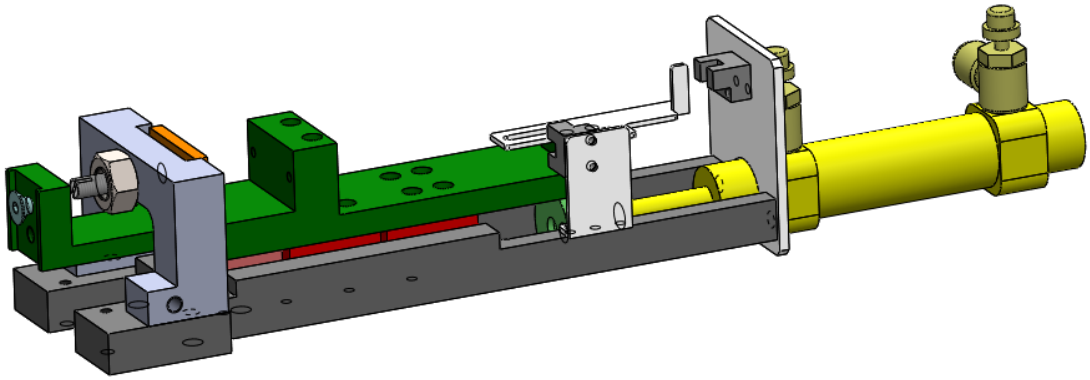


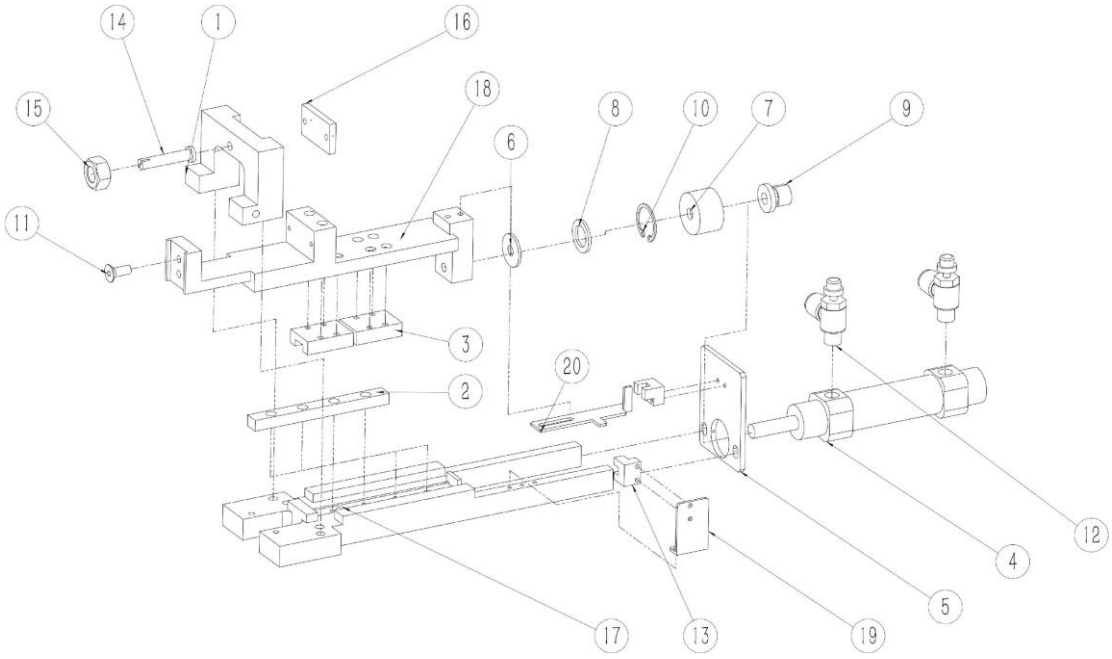
CTA-A part material list

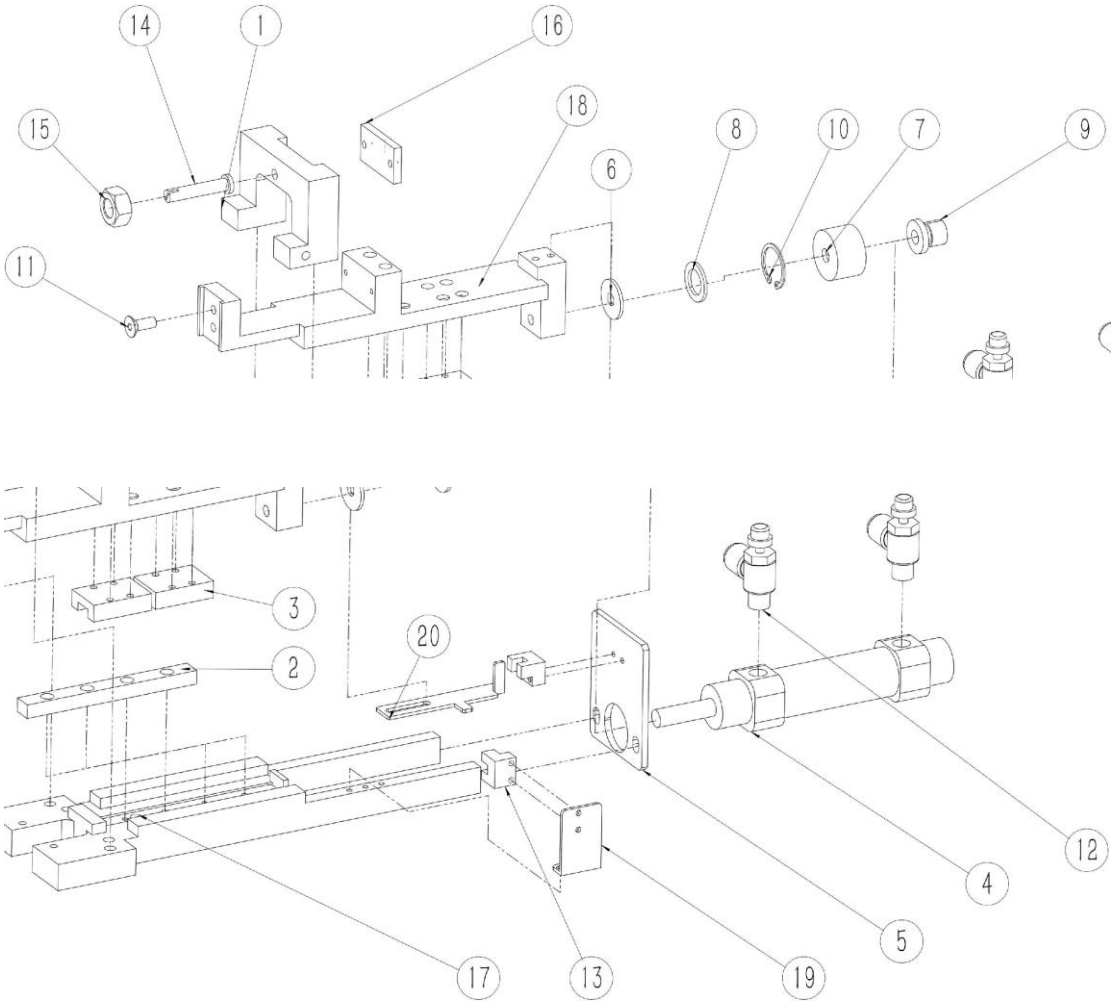
Item number	Part number	Description	Quantity	Remarks
1	CTA main board	3K-12-CTA-A-01	1	
2	Sprocket gear	3K-12-CTA-A-02	2	
3	Sprocket bearing seat	3K-12-CTA-A-03	2	
4	Sprocket bearing cover	3K-12-CTA-A-04	2	
5	Support frame1	3K-12-CTA-A-05	2	
6	Sprocket gasket	3K-12-CTA-A-06	2	
7	screw limit block	3K-12-CTA-A-07	1	
8	M5X12screw	3K-12-CTA-A-08	1	
9	bearing61912	3K-12-CTA-A-09	2	
10	Right White Sai Steel Gasket	3K-12-CTA-A-10	1	
11	Left white steel gasket	3K-12-CTA-A-11	1	

12	pins (diameter6.3, length30)	3K-12-CTA-A-12	2	
13	sprocket guard Cover	3K-12-CTA-A-13	2	
14	M6X30screw	3K-12-CTA-A-14	6	

CTA-B Part Exploded View





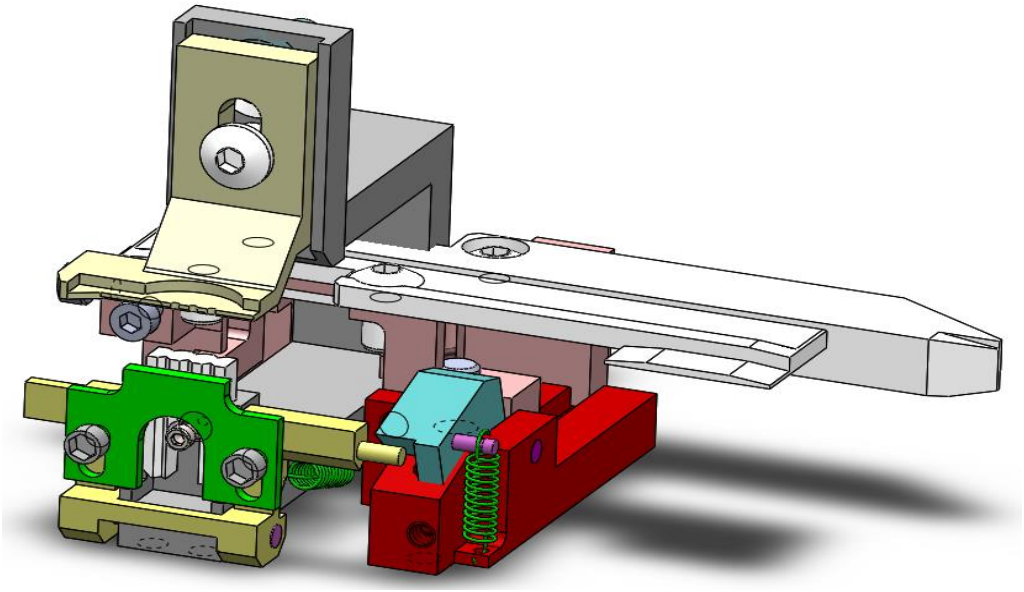


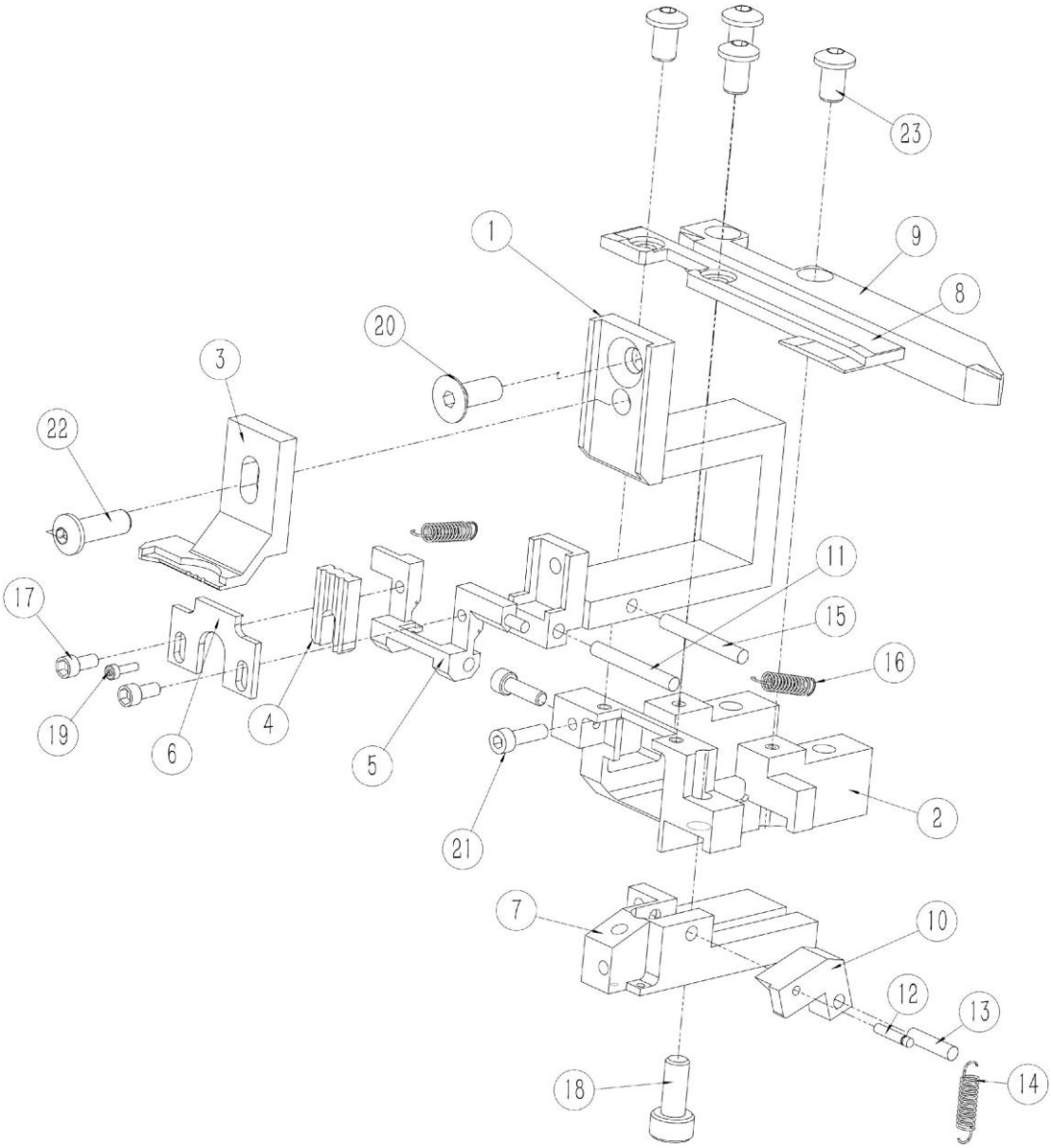
CTA-B Part Material List

Item No.	Part No.	Description	Quanti ty	Remarks
1	Feeding stopper	3K-12-CTA-B-01	1	
2	85slide rail9	3K-12-CTA-B-02	1	
3	slider	3K-12-CTA-B-03	2	
4	CDM2B20-25	3K-12-CTA-B-04	1	
5	cylinder mounting plate	3K-12-CTA-B-05	1	
6	M6screw You li rubber washer	3K-12-CTA-B-06	1	
7	M8floating head cover	3K-12-CTA-B-07	1	
8	M8screw washer	3K-12-CTA-B-08	1	
9	M8floating head1	3K-12-CTA-B-09	1	
10	21.5Circlip	3K-12-CTA-B-10	1	

11	M5X10taper screw	3K-12-CTA-B-11	1	
12	Steam pipe joint (JIADI-6)	3K-12-CTA-B-12	2	
13	PM-L24	3K-12-CTA-B-13	2	
14	stroke limit screw	3K-12-CTA-B-14	1	
15	M5nut	3K-12-CTA-B-15	1	
16	CTA buffer glue	3K-12-CTA-B-16	1	
17	CAT slider mounting seat	3K-12-CTA-B-17	1	
18	Feeding bracket1	3K-12-CTA-B-18	1	
19	CTA sensor mounting piece	3K-12-CTA-B-19	1	
20	CTA sensor sheet	3K-12-CTA-B-20	1	

CTA-C part exploded view

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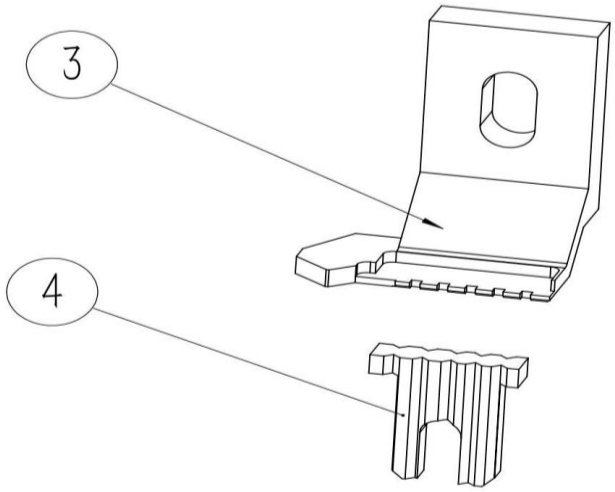
CTA-C part material list

item number	part number	description	quantity	quantity
1	curved feeder	3K-12-CTA-C-01	1	
2	feeder iron	3K-12-CTA-C-		
3	Pusher plate	3K-12-CTA-C-		
4	waveform pad	3K-12-CTA-C-		
5	spring clip feeder	3K-12-CTA-C-		
6	clip material	3K-12-CTA-C-06	1	
7	Clip holder	3K-12-CTA-C-07	1	
8	before the chain guard block	3K-12-CTA-C-		
9	Chain rear guard	3K-12-CTA-C-09	1	
10	Feeding stop	3K-12-CTA-C-10	1	
11	Limit pin	3K-12-CTA-C-11	1	
12	limit pin1	3K-12-CTA-C-12	1	
13	Limit pin2	3K-12-CTA-C-13	1	
14	S-shaped elastic spring1	3K-12-CTA-C-14	1	
15	limit pin3	3K-12-CTA-C-15	1	
16	S-shaped elastic spring	3K-12-CTA-C-16	2	
17	M3inch screws	3K-12-CTA-C-17	2	
18	M5X12screw	3K-12-CTA-C-18	1	
19	M3 x10screw	3K-12-CTA-C-19	1	
20	M5X10taper screw	3K-12-CTA-C-20	1	
21	M3screwx10	3K-12-CTA-C-21	2	
22	M5X10round head screw	3K-12-CTA-C-22	1	
23	M4X10cup head screw	3K-12-CTA-C-23	4	

Exploded view of pusher, wave pad specifications and material list:

1. 10.0 pusher, explosion view of wave pad (including spacing 10; 7.5; 5.0; 2.5)



10.0 pusher, wave pad material list

items Number	Part Number	Description	Quantity	Remarks
3	Pusher-10.0	3K-12-CTA-C-03-10.0	1	
4	Wave pad-10.0	3K-12-CTA-C-04-10.0	1	

2. 7.5 Pusher, wave Exploded view of spacer block (including spacing 7.5; 5.0; 2.5)

7.5 pusher, wave spacer material list

item number	part number	description	quantity	note
3	pusher-7.5	3K-12-CTA-C-03-7.5	1	
4	Wave pad-7.5	3K-12-CTA-C-04-7.5	1	

3.5.0 pusher, wave pad exploded view (including spacing 5.0; 2.5)
5.0 pusher, wave pad material list

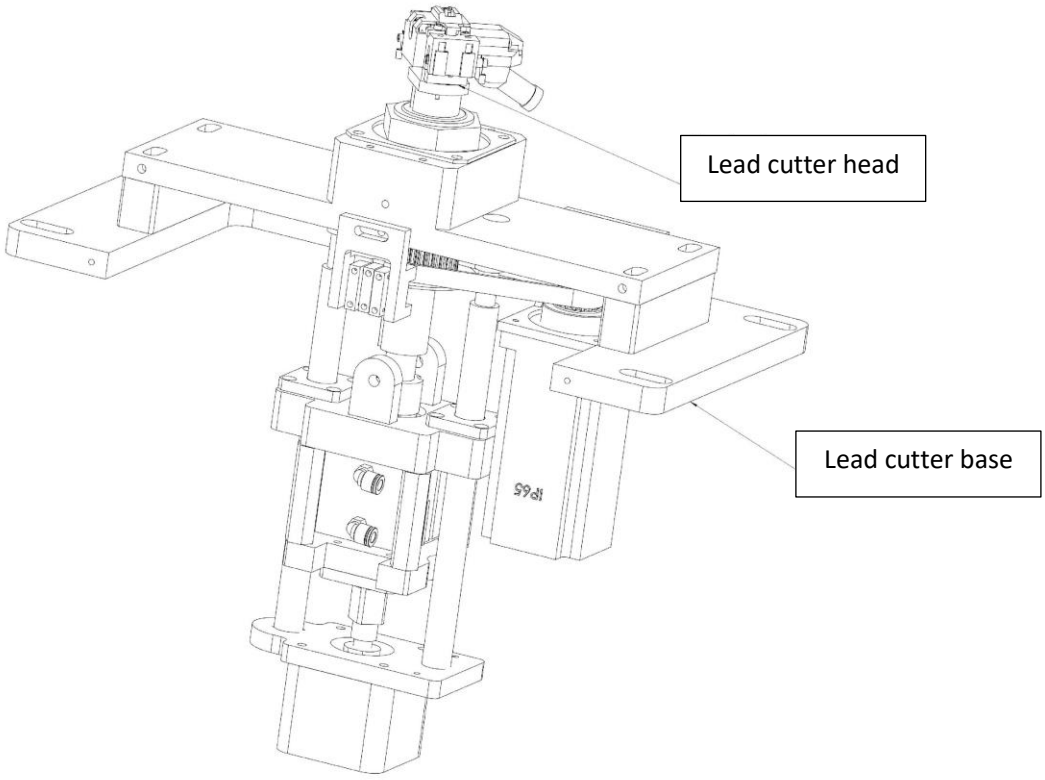
item number	parts Number	Description	Quantity	Remarks
3	Pushing piece-5.0	3K-12-CTA-C-03-5.0	1	
4	Wave pad-5.0	3K-12-CTA-C-04-5.0	1	

4, 3.5 Pushing piece, wave pad Exploded view (including spacing 3.5; 5.0; 2.5)

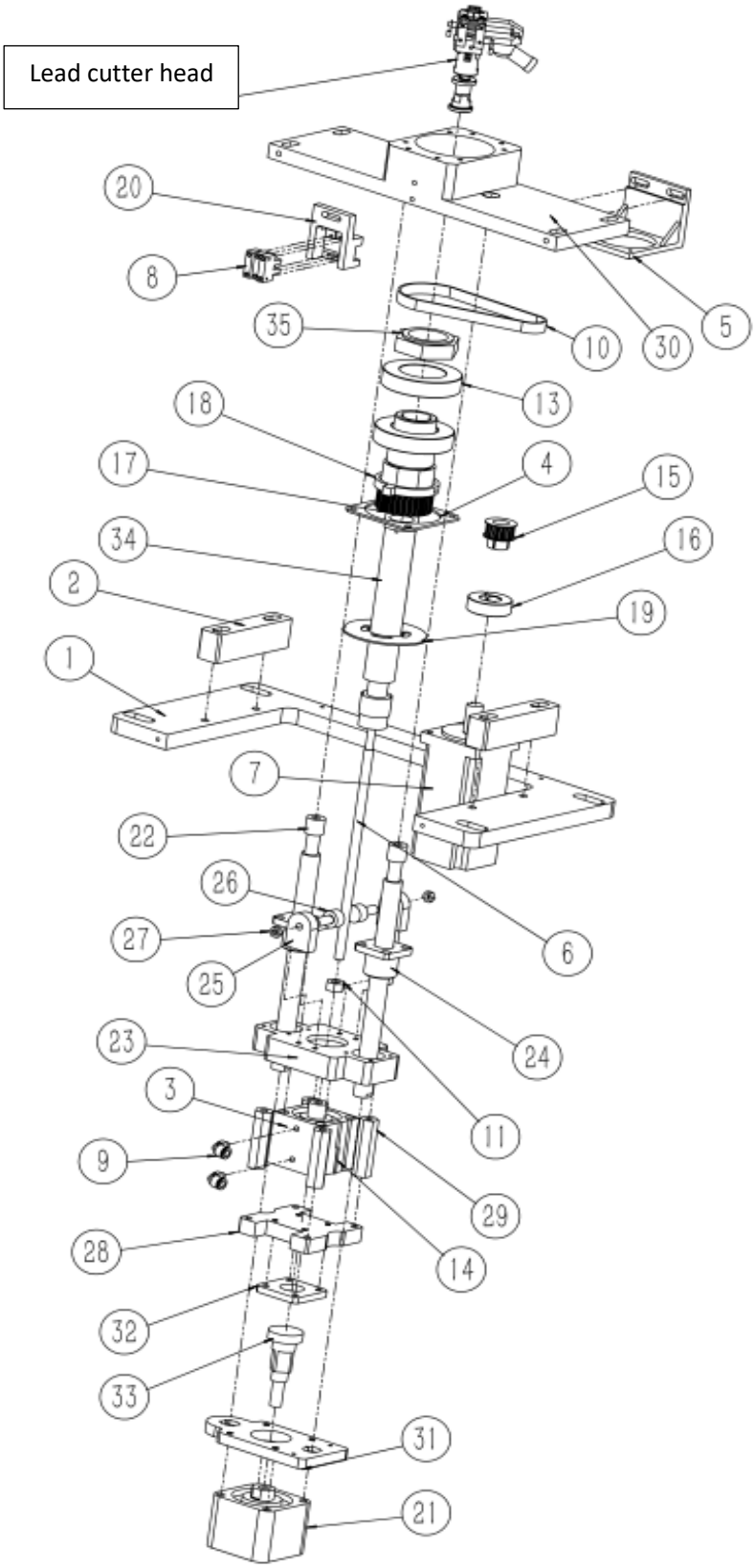
3.5 pusher, wave pad material list

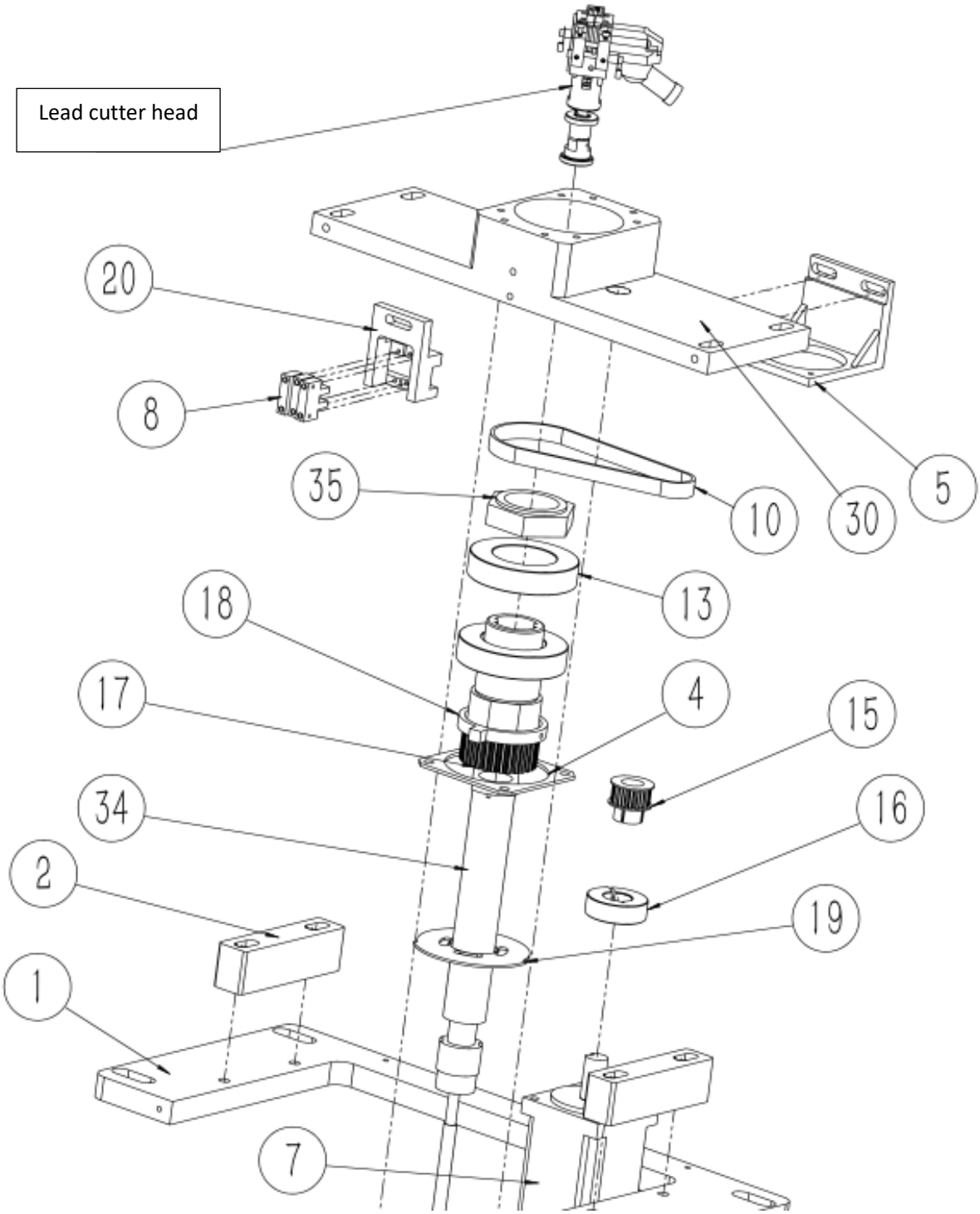
item number	part number	description	quantity	note
3	pusher-3.5	3K-12-CTA-C-03-3.5	1	
4	wave pad Block-3.5	3K-12-CTA-C-04-3.5	1	

5. Lead cutter base assembly



Lead cutter base disassembled view




Lead cutter head
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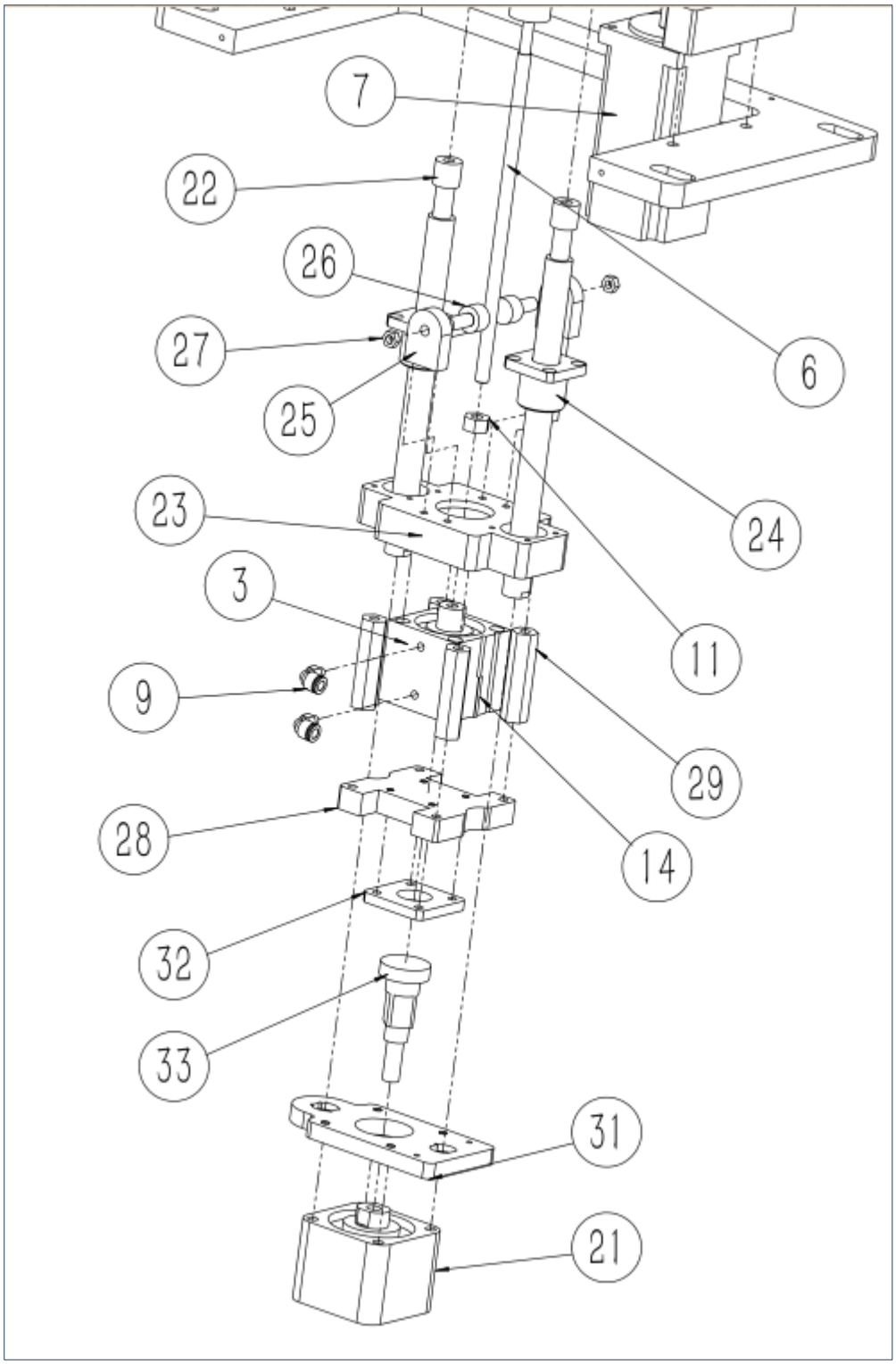
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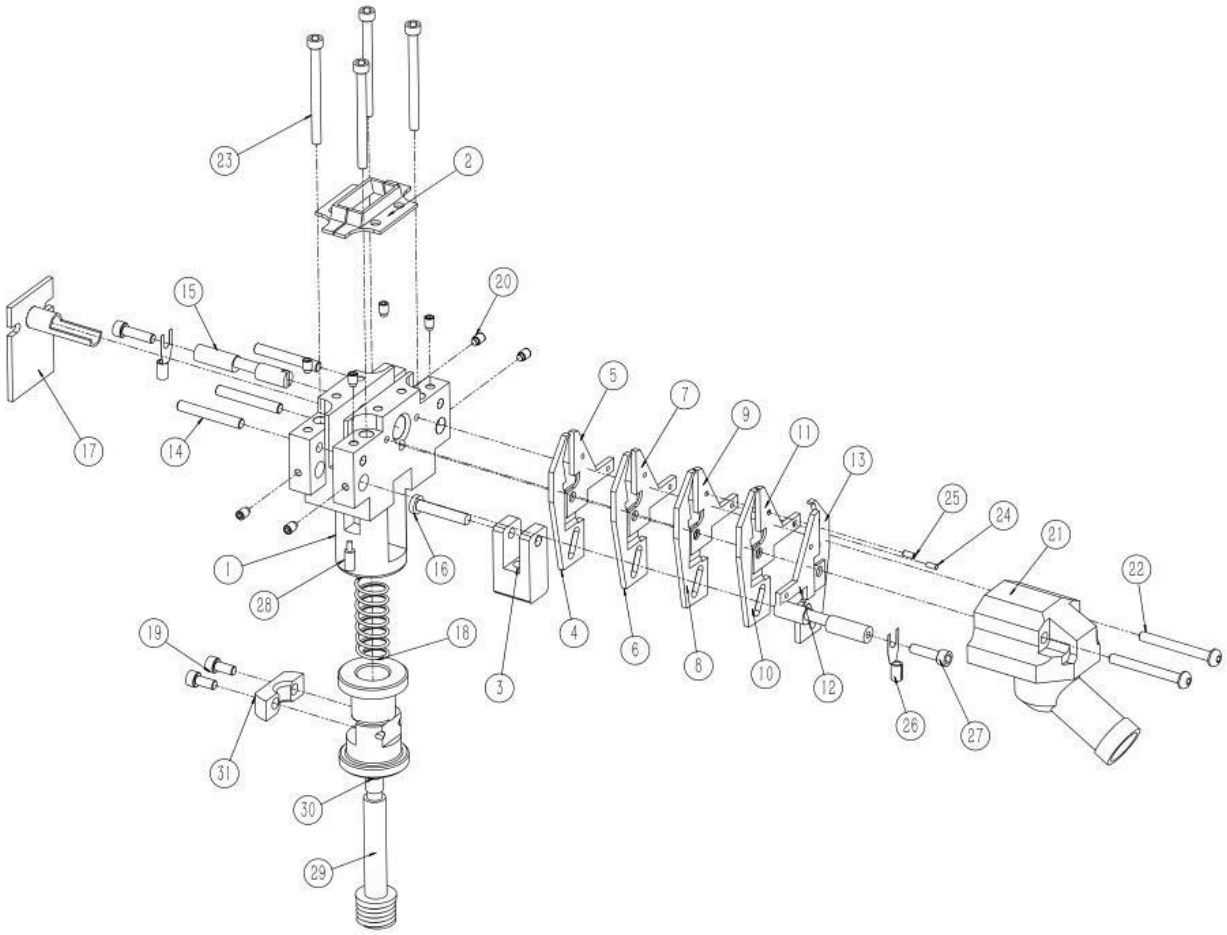
Lead cutter base raw material list

item number	part number	description	quantity	quantity
1	base bottom plate	3K-12-JJDZ-01	1	
2	Base block	3K-12-JJDZ-02	2	
3	Base cylinder2	3K-12-JJDZ-03	1	
4	squared washer	3K-12-JJDZ-04	1	
5	Base motor mount	3K-12-JJDZ-05	1	
6	cylinder2connecting rod	3K-12-JJDZ-06	1	
7	400Wmotor	3K-12-JJDZ-07	1	
8	SX670	3K-12-JJDZ-08	3	
9	Steam pipe joint1	3K-12-JJDZ-09	2	
10	belt	3K-12-JJDZ-10	1	
11	M8stainless steel nut	3K-12-JJDZ-11	1	
12	Base Acrylic Cover	3K-12-JJDZ-12	1	No use
13	Bearing6008Z	3K-12-JJDZ-13	2	
14	Magnetic switch (SMC-D-A93)	3K-12-JJDZ-14	1	
15	Motor push rod pulley A	3K-12-JJDZ-15	1	
16	18ring	Holding3K-12-JJDZ-16	1	
17	Base rotating pulley2	3K-12-JJDZ-17	1	
18	Base rotation limit ring	3K-12-JJDZ-18	1	
19	Base rotating induction plate 3	3K-12-JJDZ-19	1	
20	base rotating induction block	3K-12-JJDZ-20	1	
21	cylinderACQ50X10-S	3K-12-JJDZ-21	1	
22	guide post	3K-12-JJDZ-22	2	
23	Fork frame fixing block	3K-12-JJDZ-23	1	
24	Copper sleeve16	3K-12-JJDZ-24	2	
25	small fork frame	3K-12-JJDZ-25	2	
26	Follower bearing-A	3K-12-JJDZ-26	2	
27	M6nut.	3K-12-JJDZ-27	2	
28	Fixed plate1	3K-12-JJDZ-28	1	
29	hexagonal column	3K-12-JJDZ-29	4	
30	Scissor base	3K-12-JJDZ-30	1	
31	Cylinder fixing plate1	3K-12-JJDZ-31	1	
32	floating joint clamp	3K-12-JJDZ-32	1	
33	floating joint1	3K-12-JJDZ-33	1	
34	Base spline shaft1	3K-12-JJDZ-34	1	

35	customized nut1	3K-12-JJDZ-35	1	

Lead cutter head exploded view



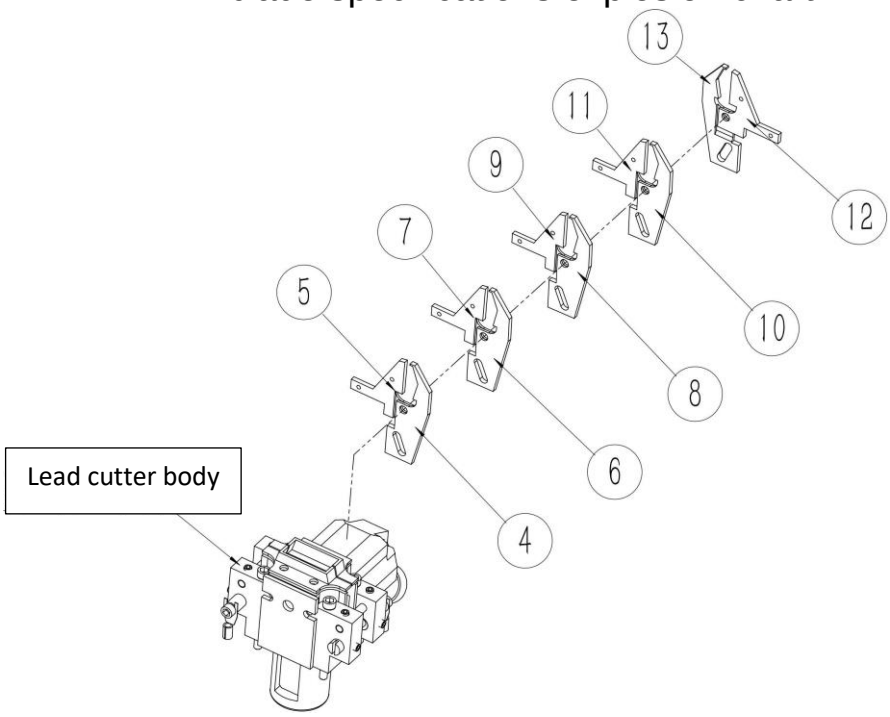
Scissor Material List

Item No.	Part Number	Description	Quantity	Remark
1	Scissor Body	ToeToe3K-12-JJQ-01	1	
2	Cut toe iron cover	3K-12-JJQ-02	1	
3	Shear pin connector block	3K-12-JJQ-03	1	
4	Shear foot movable blade10.0	3K-12-JJQ-04Wearable	1	parts
5	Shear foot fixed blade10.0	3K-12-JJQ-05Wearable	1	parts
6	Shear foot movable blade7.5	3K-12-JJQ-06	1	Vulnerable Pieces of
7	fixed blades for scissor feet7.5	3K-12-JJQ-07	1	wearing parts
8	movable blades for scissor feet5.0	3K-12-JJQ-08	1	wearing parts
9	fixed blades for scissor feet5.0	3K-12-JJQ-09	1	Easy parts
10	Shear foot movable blade2.5	Wearable3K-12-JJQ-10Wearable	1	parts
11	Shear foot fixed blade2.5	3K-12-JJQ-11Wearable	1	parts
12	Shear foot fixed blade	3K-12-JJQ-12	1	Easy parts
13	Shear foot movable blade	Worsted3K-12-JJQ-13Wearable	1	parts
14	Shear foot knife pin	3K-12-JJQ-14	3	
15	Scissor pin2	3K-12-JJQ-15	2	
16	Foot trimmer accessories2	3K-12-JJQ-16	1	
17	material foot snorkel	3K-12-JJQ-17	1	
18	Clipper spring	3K-12-JJQ-18	1	
19	M3X6inch screw	3K-12-JJQ-19	2	
20	M3X4inch Kimi screw	3K-12-JJQ-20	9	
21	Scissor accessories4	3K-12-JJQ-21	1	
22	M3X25inch screw	3K-12-JJQ-22	2	
23	M3X32inch screw	3K-12-JJQ-23	4	
24	Scissor pin1	3K-12-JJQ-24	1	
25	Scissor knife hollow pin	3K-12-JJQ-25	1	
26	line plug	3K-12-JJQ-26	2	

27	M3X10inch screw	3K-12-JJQ-27	2	
28	spring Kimi screw	3K-12-JJQ-28	1	
29	Scissor accessories8	3K-12-JJQ-29	1	
30	Scissor accessories7	3K-12-JJQ-30	1	
31	Foot trimmer accessories6	3K-12-JJQ-31	1	

Scissor blade specifications exploded view and material list:

1. blade specifications explosion chart



10.0 Scissor10.0 Scissor blade specifications material list

Item No.	Part number	Description	Quantity	Remarks
4	Scissor movable blade10.0	3K-12-JJT-04-10.0	1	
5	Scissor foot fixed blade10.0	3K-12-JJT-05-10.0	1	
6	Scissor foot movable blade7.5	3K-12-JJT-06-7.5	1	
7	Scissor foot fixed blade7.5	3K-12-JJT-07-7.5	1	

8	Shear foot movable blade5.0	3K-12-JJT-08-5.0	1	
9	Scissor foot fixed blade5.0	3K-12-JJT-09-5.0	1	
10	Scissor foot movable blade2.5	3K-12-JJT-10-2.5	1	
11	Scissor foot fixed blade2.5	3K-12-JJT-11-2.5	1	
12	Scissor foot fixed blade	3K-12-JJT-12	1	
13	Scissor foot movable blade	3K-12-JJT-13	1	

7.5 Scissor blade specifications material list

Item No.	Part number	Description	Quantity	Remarks
4	Scissor movable blade7.5	3K-12-JJT-06-7.5Wearable	1	parts
5	Scissor fixed blade7.5	3K-12-JJT-07-7.5	1	parts
6	Shear foot movable blade5.0	Wearable3K-12-JJT-08-5.0Wearable	1	parts
7	Shear foot fixed blade5.0	3K-12-JJT-09-5.0Wearable	1	parts
8	Shear foot movable blade2.5	3K-12 -JJT-10-2.5Wearable	1	parts
9	Shear foot fixed blade2.5	3K-12-JJT-11-2.5Wearable	1	parts
10	Shear foot fixed blade	3K-12-JJT-12Wearable	1	parts
11	Shear foot movable blade	3K-12-JJT-13	1	consumables

5.0blade shear pin specifications BOM

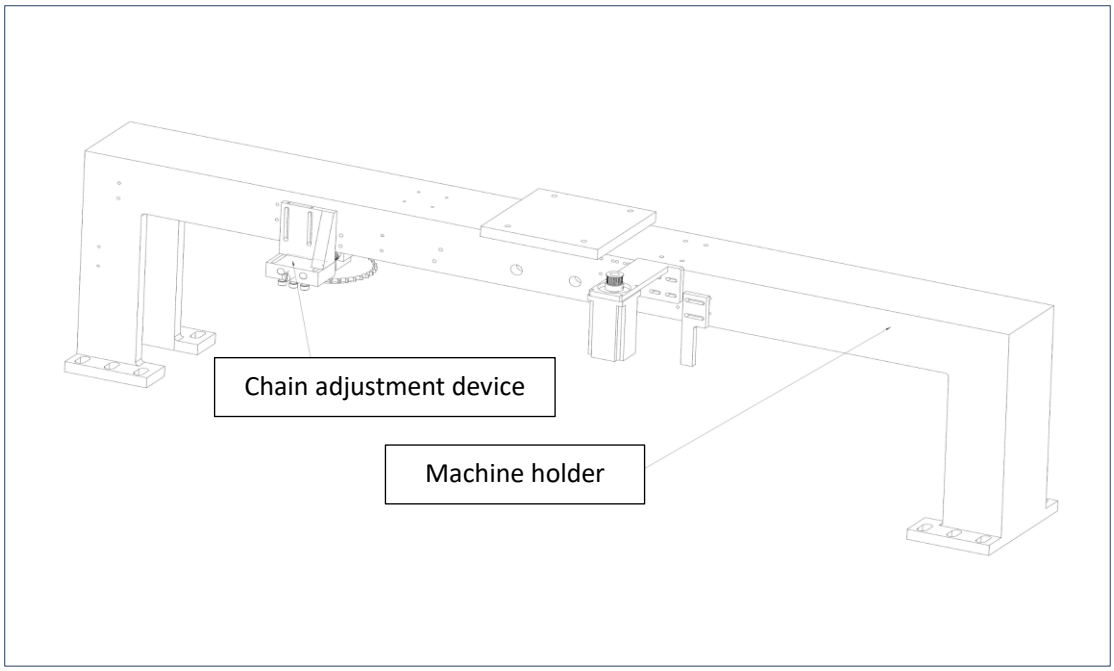
Number item	Part number		number of	Remark
4	movable blade shear pin	5.0 3K-12-JJT-08-5.0		consumables

5	shear pin fixed blade5.0	3K-12-JJT-09-5.0Wearable	1	parts
6	Shear foot movable blade2.5	3K-12-JJT-10-2.5Wearable	1	parts
7	Shear foot fixed blade2.5	3K-12-JJT-11-2.5	1	Easy Damaged parts
8	Scissor foot fixed blade	3K-12-JJT-12Wearable	1	parts
9	Scissor foot movable blade	3K-12-JJT-13Wearable	1	parts

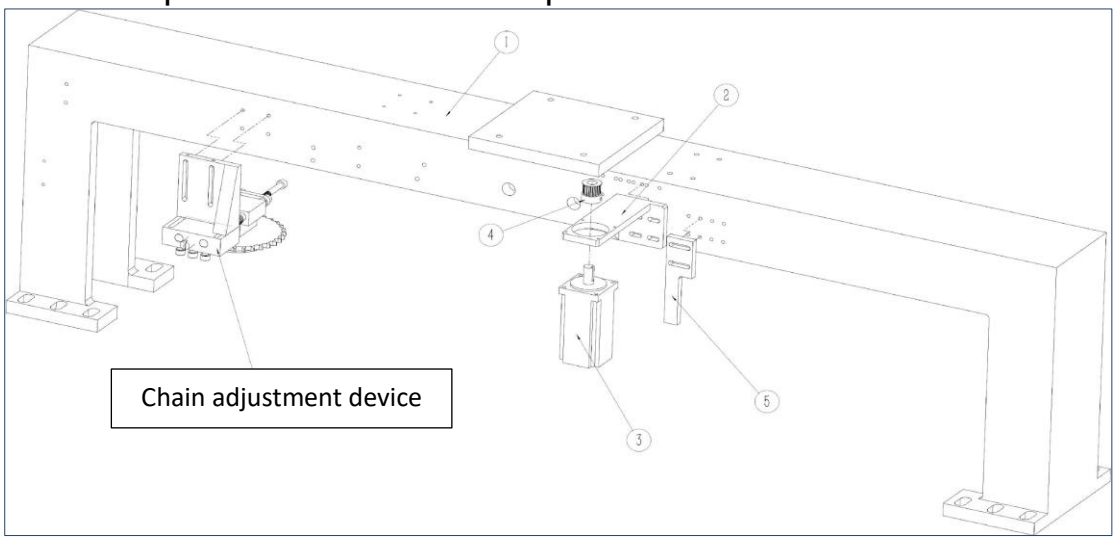
3.5 Scissor blade specifications Material list

Item No.	Part number	Description	Quantity	Remarks
4	Cutting foot movable blade7.5	3K-12-JJT-06-3.5Wearable	1	parts
5	Scissor foot fixed blade7.5	3K-12-JJT-07-3.5Wearable	1	parts
6	Scissor foot movable blade5.0	3K-12-JJT-08 -5.0	1	parts
7	Shear foot fixed blade5.0	Wearable3K-12-JJT-09-5.0Wearable	1	parts
8	Shear foot movable blade2.5	3K-12-JJT-10-2.5Wearable	1	parts
9	Shear foot fixed blade2.5	3K-12-JJT-11-2.5Wearable	1	parts
10	Scissor foot fixed blade	3K-12-JJT-12Wearable	1	parts
11	Scissor foot movable blade	3K-12-JJT-13Wearable	1	parts

6. Cross beam assembly



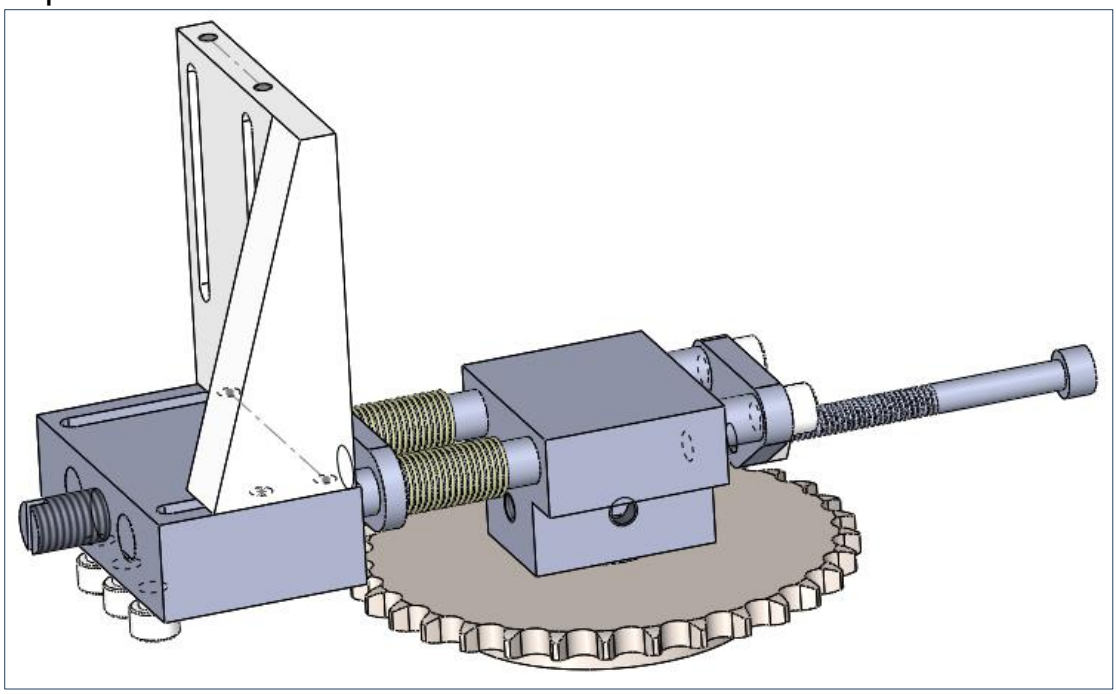
Frame Exploded view of the components of the

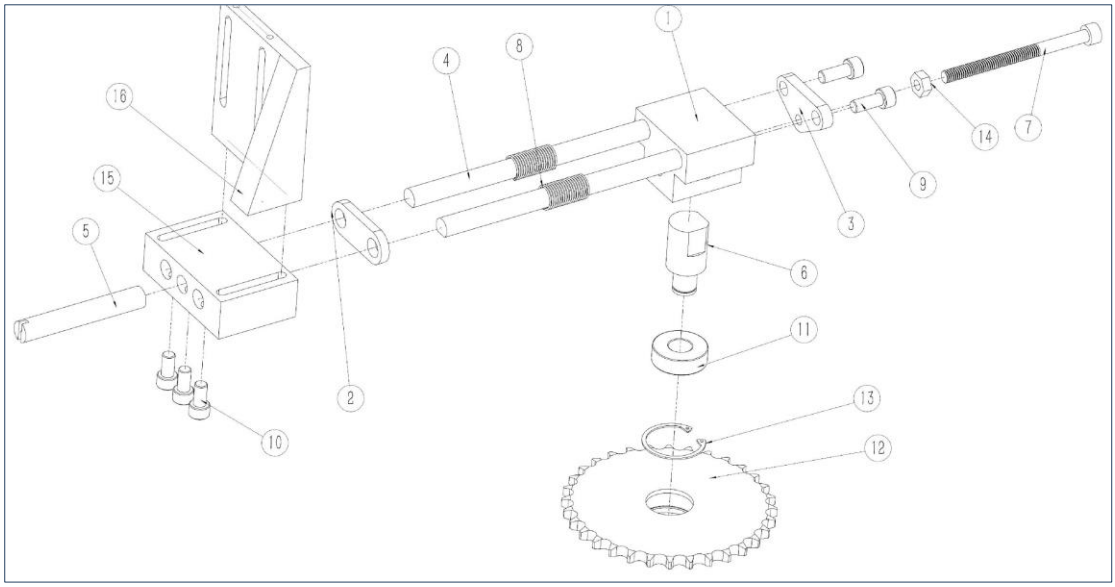


Rack device material list

item number	part number	description	quantity	remarks
1	conjoined machine working rack.	3K-12-JJZZ-01	1	
2	Head steering motor mounting seat	3K-12-JJZZ-02	1	
3	400Wmotor	3K-12-JJZZ-03	1	
4	steering pulleyA-15teeth	3K-12-JJZZ-04	1	
5	Chain sliding groove3Hanging plate	3K-12-JJZZ-05	1	

Exploded view of



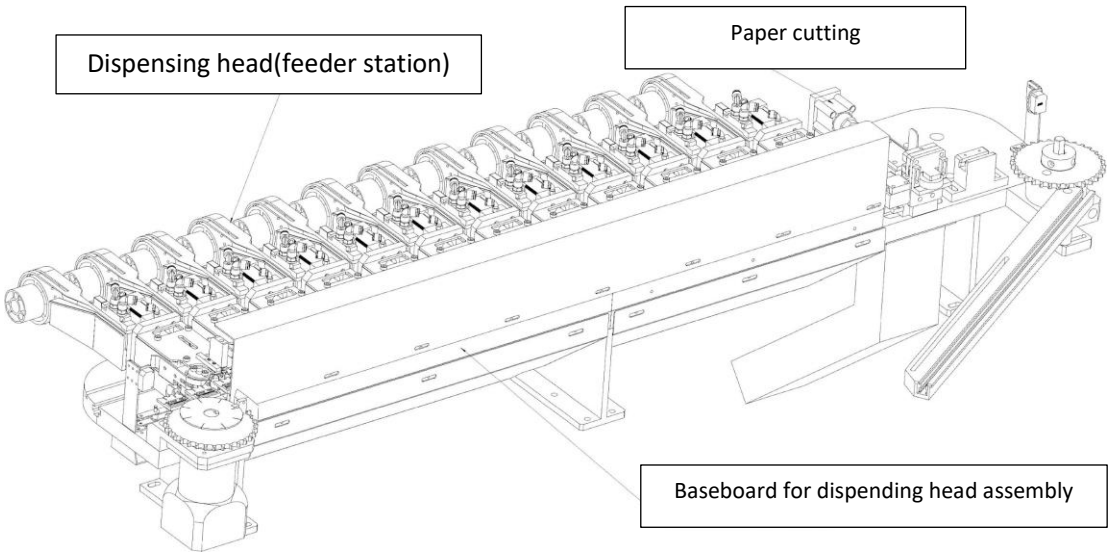


Chain regulator chain regulator material list

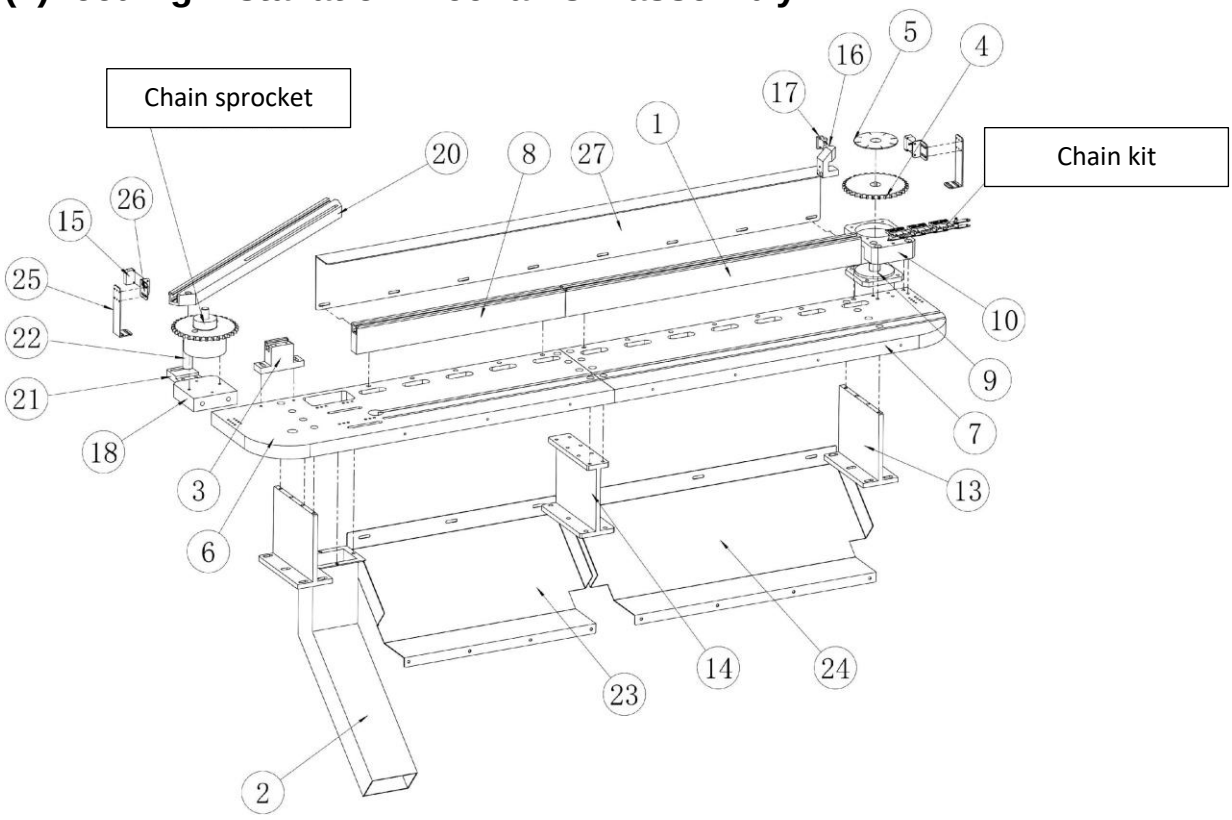
item numbe r	part number	description	quan tity	remarks
1	chain regulator holder1	3K-12-LTTJ-01	1	
2	chain regulator spring baffle	3K-12-LTTJ-02	1	

3	chain adjuster spring baffle1	3K-12-LTTJ-03	1	
4	chain regulator guide post	3K-12-LTTJ-04	2	
5-	chain adjuster adjusting screw	3K-12-LTTJ-05	1	
6	chain adjuster fixed shaft	3K-12-LTTJ-06	1	
7	M8long screw	3K-12-LTTJ-07	1	
8	chain regulator spring	3K-12-LTTJ-08	2	
9	M8X20screw	3K-12-LTTJ-09	2	
10	M8X15screw	3K-12-LTTJ-10	3	
11	bearing6202	3K-12-LTTJ-11	1	
12	sprocket08B-10	3K-12-LTTJ-12	1	
13	inner circlip (diameter40)	3K-12-LTTJ-13	1	
14	M8nut	3K-12-LTTJ-14	1	
15	1209-1	3K-12-LTTJ-15	1	
16	chain tension fixing seat	3K-12-LTTJ-16	1	

7. Feeding assembly



(1) feeding installation mechanism assembly

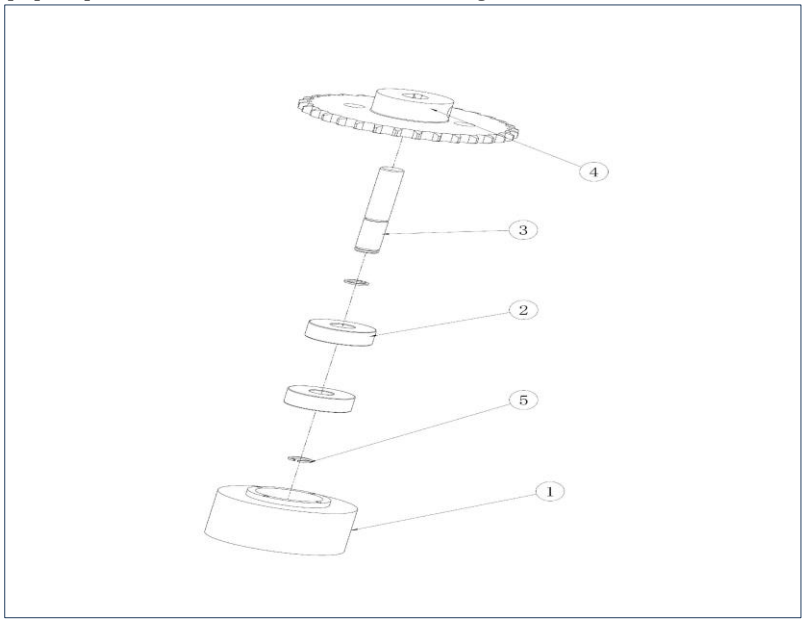


Distribution head mounting plate material list

item number	part number	description	quantity	remarks
1	chain sliding groove	3K-12-FPTAZB-01	1	
2	Paper-cut garbage funnel	3K-12-FPTAZB-02	1	
3	Adjustment block of the chain	1 3K-12-FPTAZB-03		
4	sprocket08B-1	3K-12-FPTAZB-04	1	
5	Chain origin sensor	3K-12-FPTAZB-05	1	
6	Distribution head mounting plate1	3K-12-FPTAZB-06	1	
7	Distribution head mounting plate2	3K-12-FPTAZB-07	1	
8	Chain sliding groove2	3K-12-FPTAZB-08	1	
9	DH090reducer	3K-12-FPTAZB-09	1	
10	Retrofit plate1	3K-12-FPTAZB-10	1	
11	16004Bearing	3K-12-FPTAZB-11	2	
12	Sprocket bearing cap	3K-12-FPTAZB-12	1	

13	Distributing head mounting plate support block	3K-12-FPTAZB-13	2	
14	Distributing head mounting plate support block	3K-12-FPTAZB-14	1	
15	Infrared sensor	3K-12-FPTAZB-15	2	
16	chain tail sensor bracket	3K-12-FPTAZB-16	1	
17	SX670.	3K-12-FPTAZB-17	1	
18	Right plate	mounting3K-12-FPTAZB-18	1	
19	gasket	3K-12-FPTAZB-19	1	
20	chain auxiliary slot	3K-12-FPTAZB-20	1	
21	Chain groove3Mounting plate	3K-12-FPTAZB-21	1	
22	chain sliding groove support column	3K-12-FPTAZB-22	1	
23	Paper baffle	3K-12-FPTAZB-23	1	
24	Paper baffle-B	3K-12-FPTAZB-24	1	
25	Feeder return sensor bracket1	3K-12-FPTAZB-25	2	
26	return feed sensor mounting pieces	3K-12-FPTAZB-26	2	
27	station identification board	3K-12-FPTAZB-27	1	

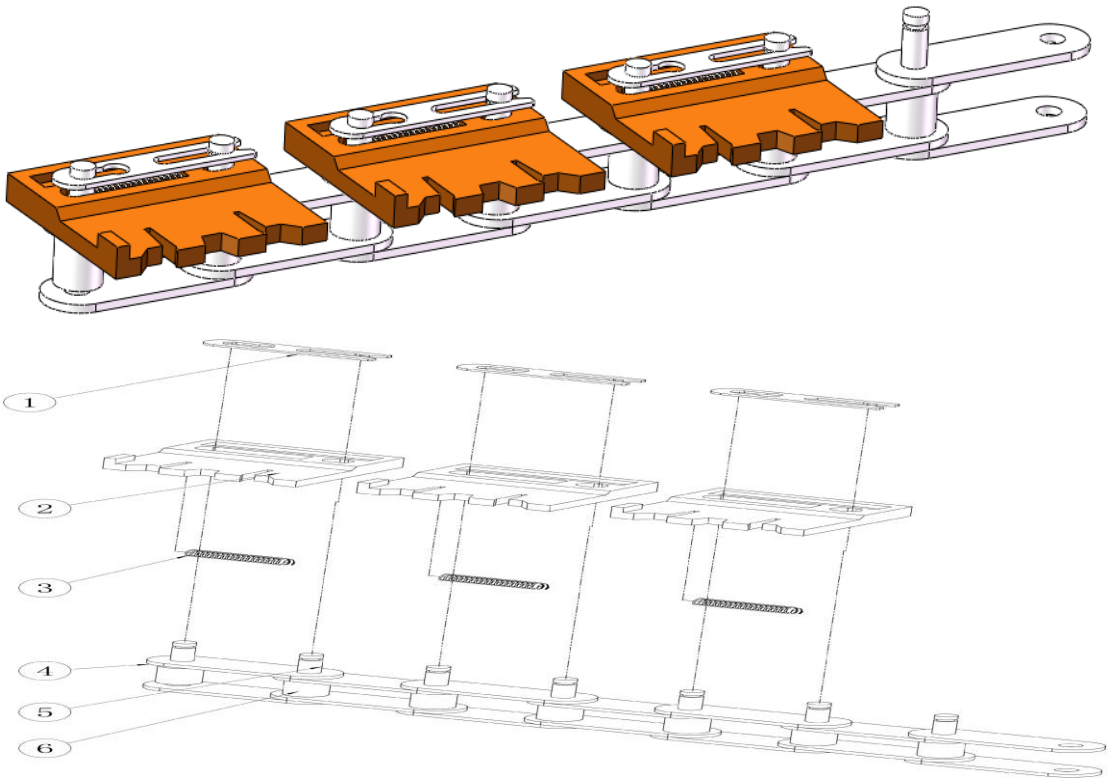
(2) Sprocket drive assembly



Sprocket drive material list

item numbe r	part number	description	quan tity	remarks
1	sprocket08B-1fixed seat	3K-12-LLCDZZ-01	1	
2	bearing6302	3K-12-LLCDZZ-02	2	
3	sprocket08B-1shaft	3K-12-LLCDZZ-03	1	
4	sprocket08A-1	3K-12-LLCDZZ-04	1	
5	internal circlip (diameter	12) 3K-12-LLCDZZ-		

(3)Exploded view of



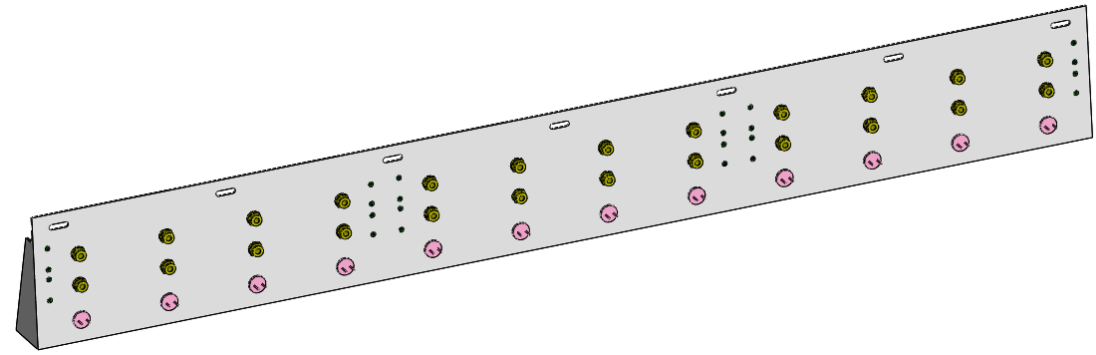
Chain combination material list of chain combination

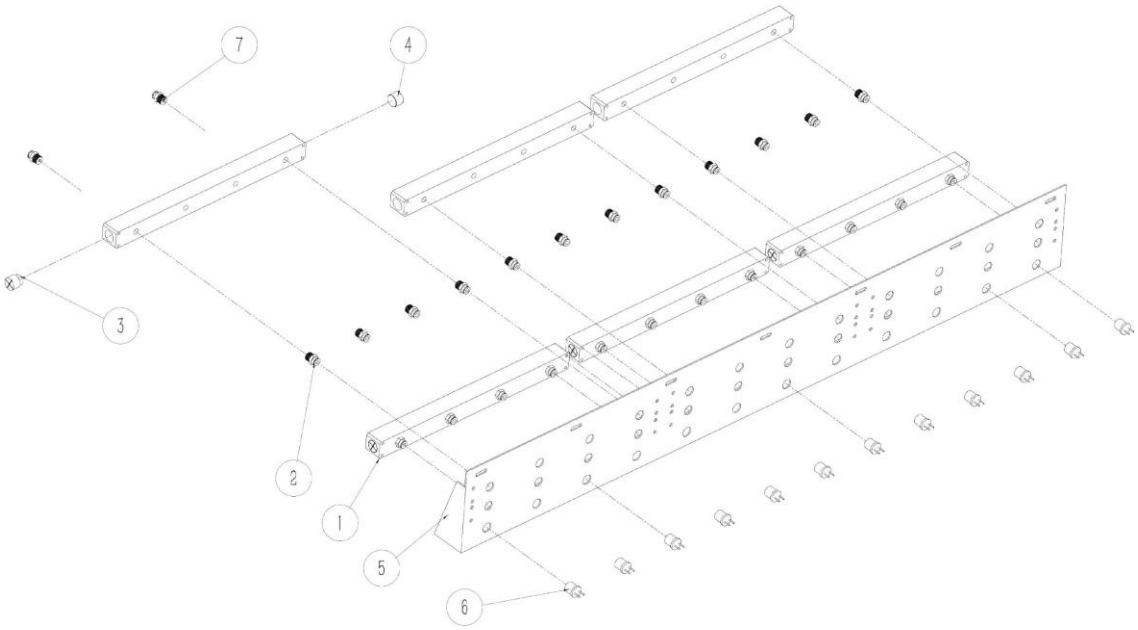
item number	part number	description	quanti ty	remarks
1	U-shaped long cir clip	3K-12-LTZH-01		
2	Chain clip	3K-12-LTZH-02		Remarks good specifications
3	Spring	3K-12-LTZH-03		see next page
4	Chain	3K-12-LTZH-04	1	
56				

Chain and folders specifications exploded view BOM

Item Number	Part Number		the number of	Remark
3	chain clip	10.0 3K-12-LTZH-03-10.0		
	chain clip	7.5 3K-12-LTZH-03-7.5		
	5.0 clip strand	3K-12-LTZH-03-5.0	3	
3	chain clamp 3.5	3K-12-LTZH-03-3.5		compatible with 5.0
3	chain clamp 2.5	3K-12-LTZH-03-2.5		special 2.5

(4) Air connection plate assembly

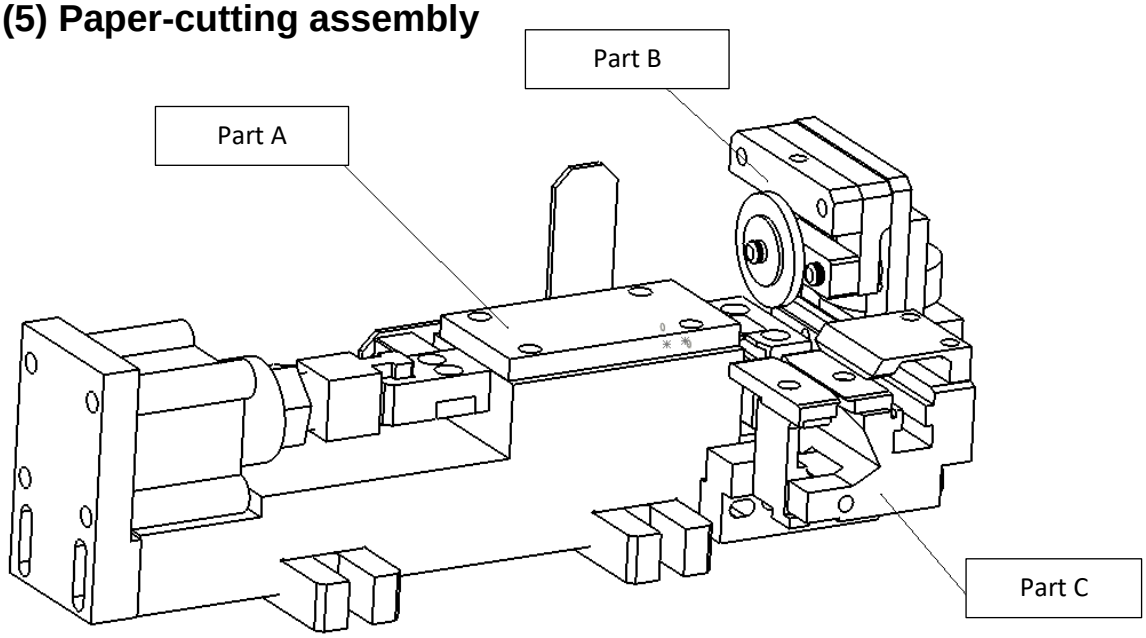




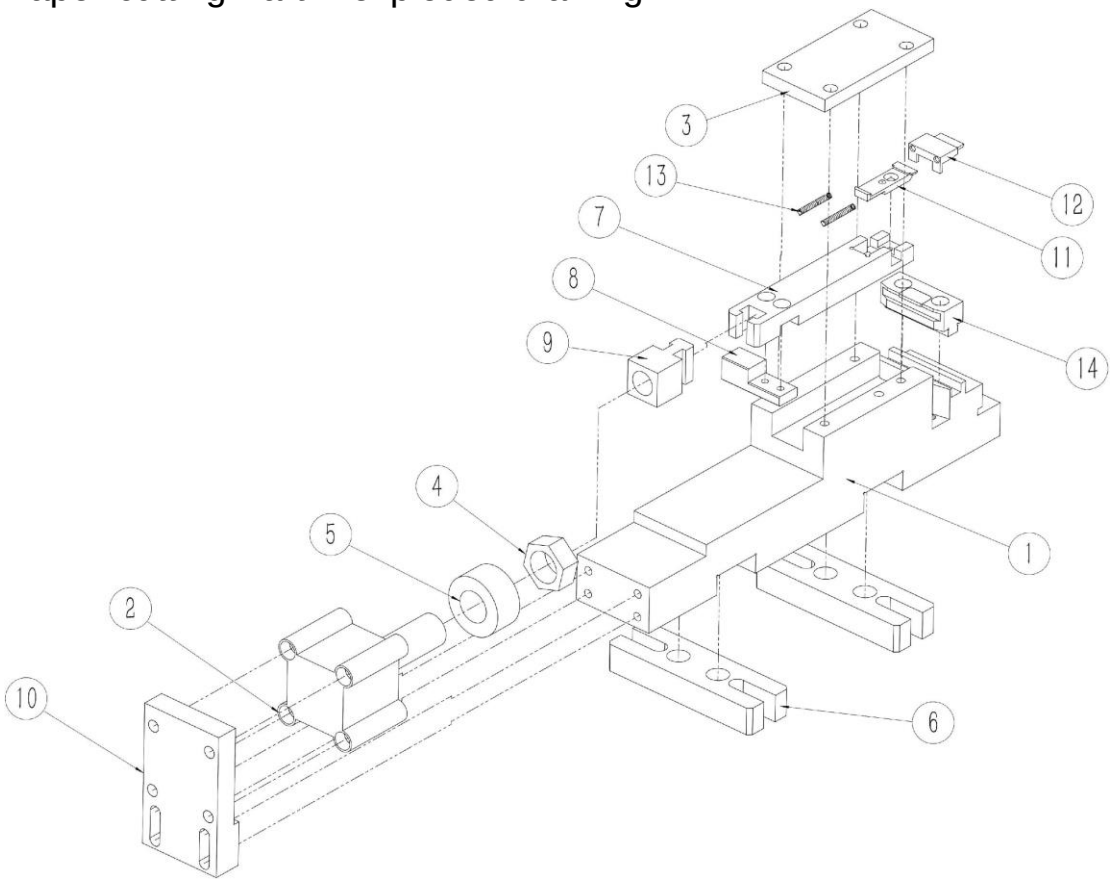
Air connection plate Part of the bill of materials

Item number	Part number	Description	Quantity	Remarks
1	Air distribution pipe	3K-12-JQBBF-01	6	
2	Steam pipe jointPC10-01	3K-12-JQBBF-02	24	
3	18Youli	Rubber Washer 3K-12-JQBBF-03	4	
4	Two-way pipe tail screw	3K-12-JQBBF-04	8	
5	Trachea sealing plate	3K-12-JQBBF-05	1	
6	Aviation connector	3K-12-JQBBF-06	12	
7	Steam pipe jointPC12-3	3K-12-JQBBF-07	2	

(5) Paper-cutting assembly



Paper-cutting Part A exploded drawing

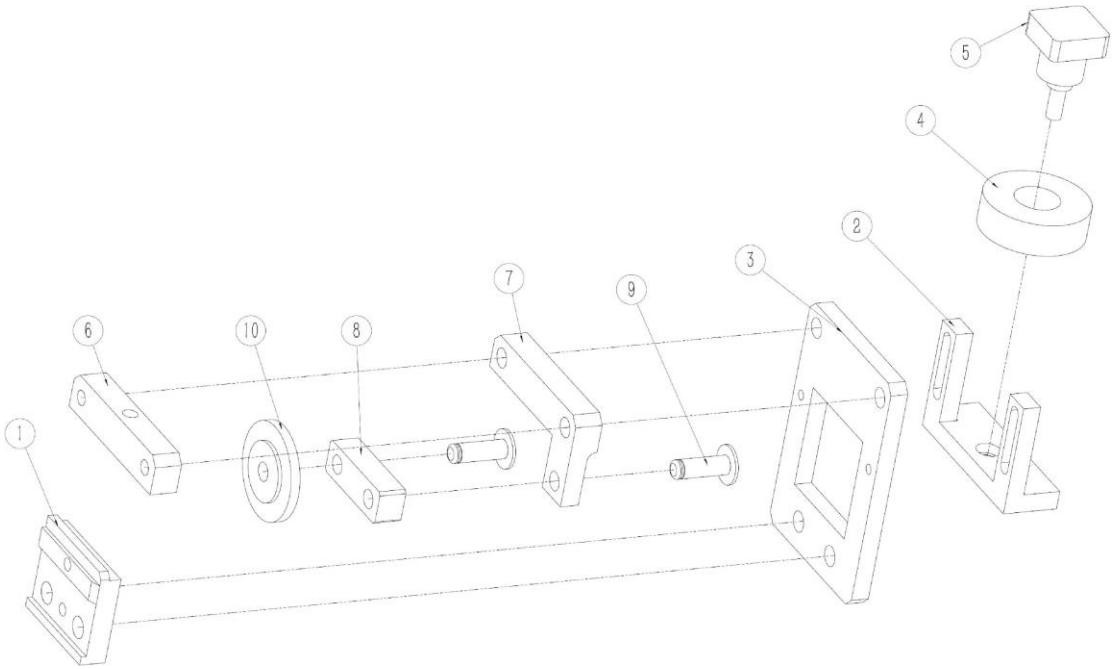


Paper-cutting Part A Material list

Item No.	Part No.	Description	Quantity	Remarks
1	Base	3K-12-JZ-ABF-01	1	
2	cylinder	3K-12-JZ-ABF-02	1	
3	Paper-cut seat cover2	3K-12-JZ-ABF-03	1	
4	M16nut	3K-12-JZ-ABF-04	1	
5	Rubber ring	3K-12-JZ-ABF-05	1	
6	parts3	3K-12-JZ-ABF-06	2	
7	paper cutting slide	3K-12-JZ-ABF-		
8	paper cutting blade sensor mounting block	3K-12-JZ-ABF-		
9	Paper-cutting cylinder connecting block1	3K-12-JZ-ABF-09	1	
10	Paper-cutting cylinder mounting block	3K-12-JZ-ABF-10	1	
11	10.0mmsmall cutter	3K-12-JZ-ABF-11	1	

12	curved push fork	3K-12-JZ-ABF-12	1	
13	Flat fork spring	3K-12-JZ-ABF-13	2	
14	Fixed knife for cutting paper	3K-12-JZ-ABF-14	1	

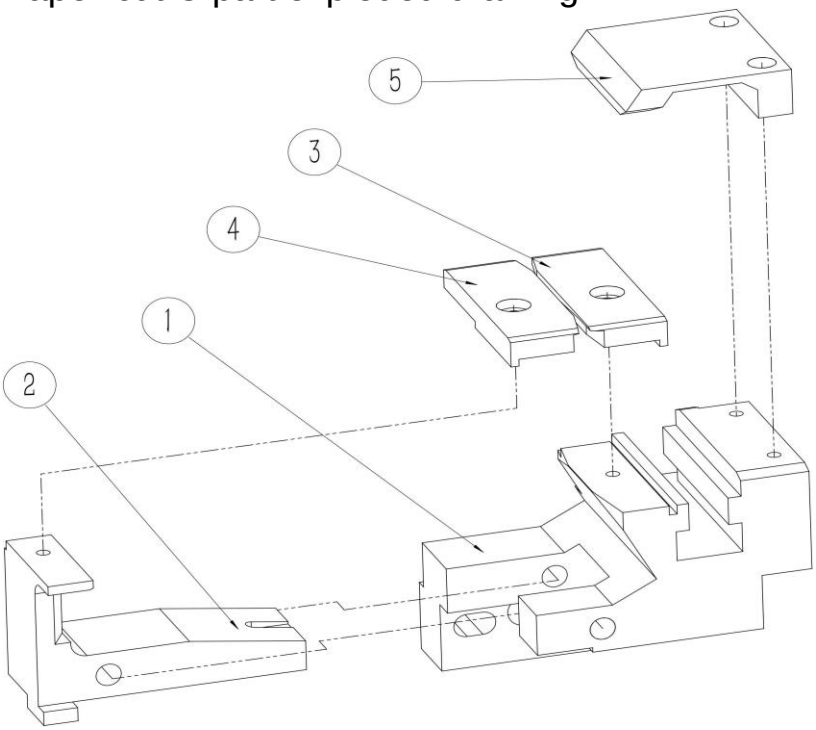
Paper-cut Part B Exploded Drawing



Paper-cut Part B Material List

Item Number	Part Number	Description	Quantity	Remarks
1	Part1-1	3K-12-JZ-BBF-01	1	
2	bearings installed version	3K-12-JZ-BBF-		
3	Bearing fixing plate	3K-12-JZ-BBF-		
4	6202Zbearing	3K-12-JZ-BBF-04	1	
5	Bearing positioning block	3K-12-JZ-BBF-05	1	
6	parts9	3K-12-JZ-BBF-06	1	
7	parts13	3K-12-JZ-BBF-07	1	
8	parts2	3K-12-JZ-BBF-08	1	
9	Plastic pin	3K-12-JZ-BBF-		
10	plastic block	3K-12-JZ-BBF-10	1	

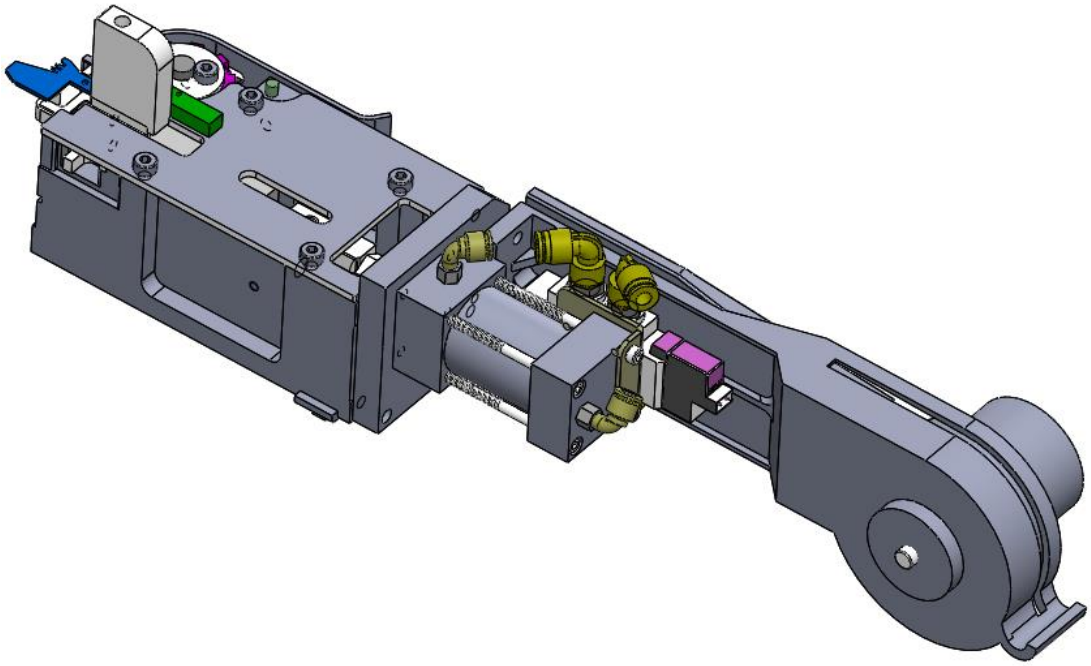
Paper-cut C part exploded drawing

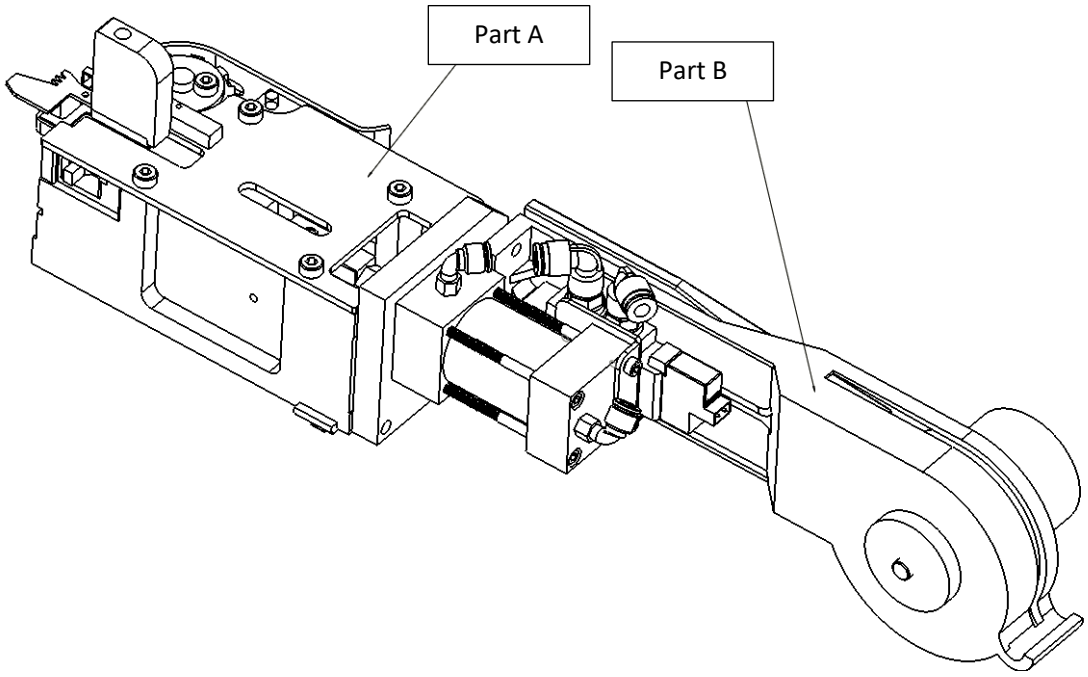


Paper-cut C material list

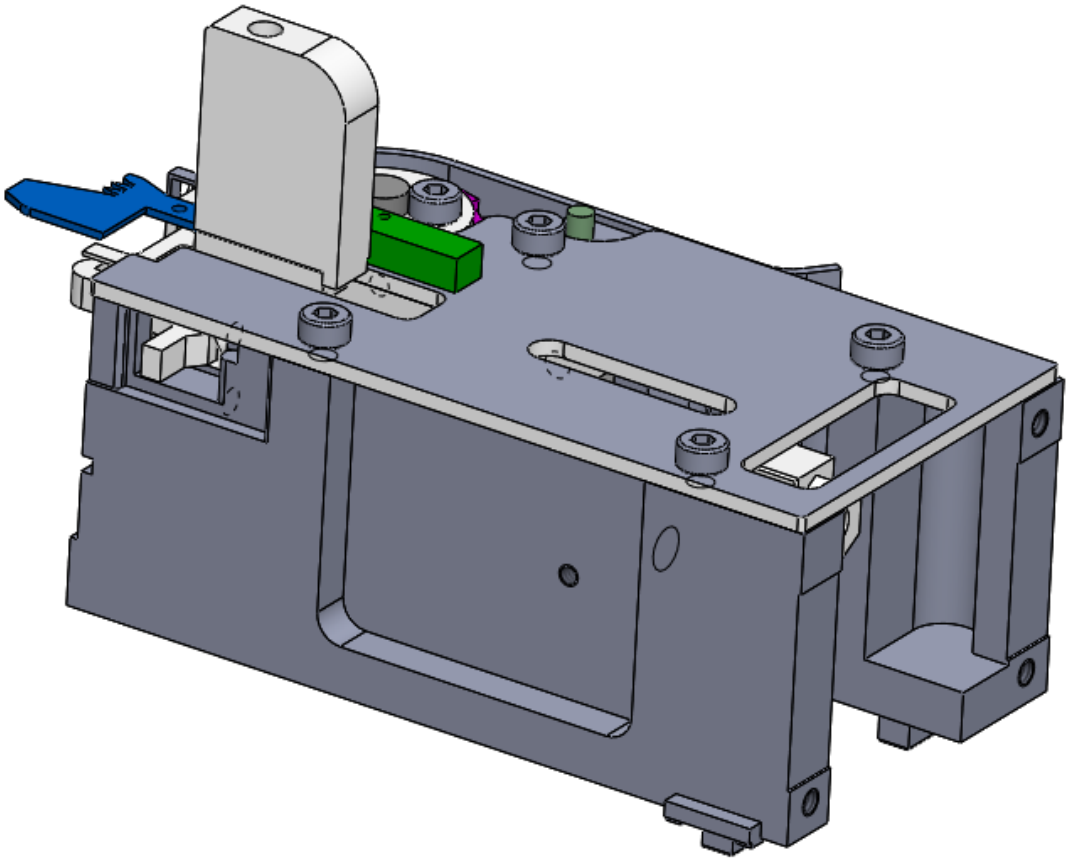
item number	part number	description	quantity	remarks
1	pull paper accessories 1	3K-12-JZ-CBF-01	1	
2	Tractor Parts	2 3K-12-JZ-CBF		
3	draw-knife	2 3K-12-JZ-CBF		
4	Paper cutter 1	3K-12-JZ-CBF-04	1	
5	Chain clamp pressure plate	3K-12-JZ-CBF-05	1	

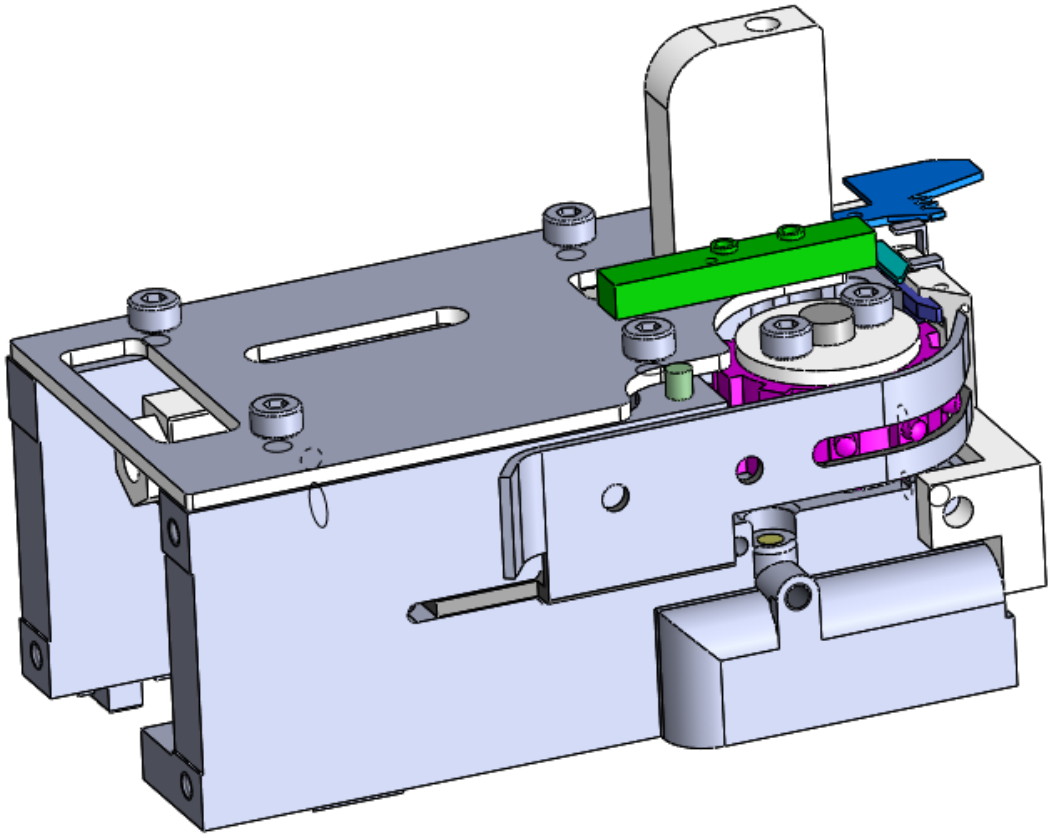
(6) Distributing head assembly

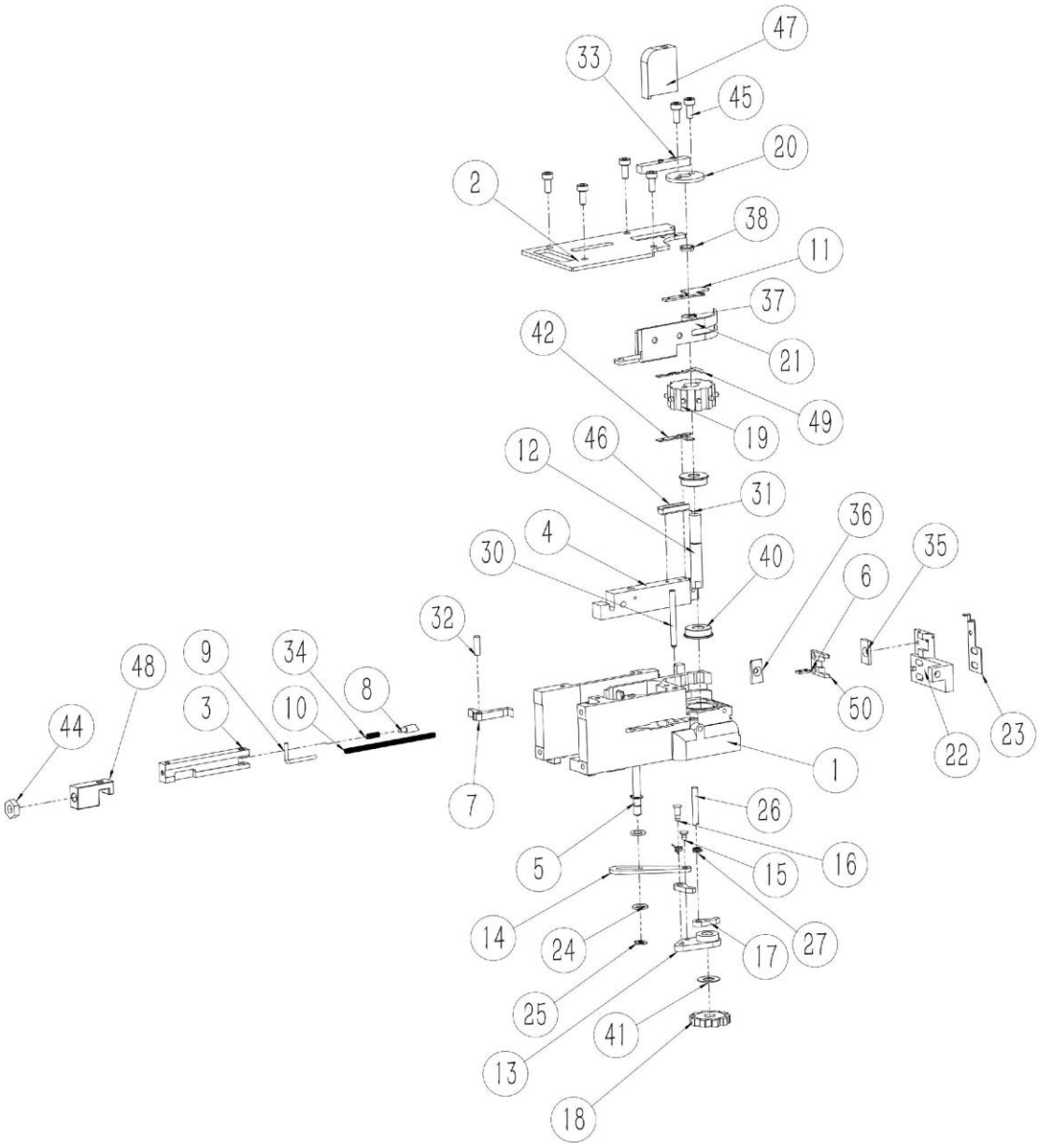




Distributing head part A exploded view







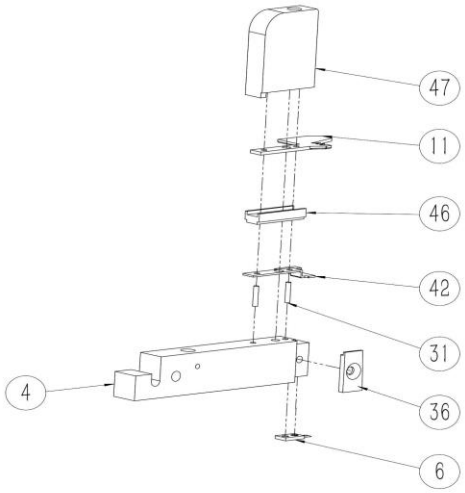
Distributing head part A material list

Item number	Part number	Description	Quantity	Quantity
1	Distributing head body	3K-12-FPT-ABF-01	1	

2	Sheet dispensing head cap	3K-12-FPT-ABF-		
3	guide block	1 3K-12-FPT-ABF		
4	feed slide	3K-12-FPT-ABF-		
5	Transmission rod2	3K-12-FPT-ABF-05	1	
6	the tape pad	3K-12-FPT-ABF-		
7	hook material grab	3K-12-FPT-ABF-07	1	
8	Elastic top post	3K-12-FPT-ABF-08	1	
9	Bending pin	3K-12-FPT-ABF-09	1	
10	small spring	3K-12-FPT-ABF-10	1	
11	Fork push piece	3K-12-FPT-ABF-11	1	Wearable parts
12	Transmission rod1	3K-12-FPT-ABF-12	1	
13	Feeding gear slider	3K-12-FPT-ABF-13	1	
14	Slide piece	3K-12-FPT-ABF-14	1	
15	Drive pin1	3K-12-FPT-ABF-15	1	
16	Drive pin2	3K-12-FPT-ABF-16	1	
17	pawl	3K-12-FPT-ABF-17	2	
18	feeding gear	3K-12-FPT-ABF-18	1	
19	distribution wheel	3K-12-FPT-ABF-19	1	
20	gland	3K-12-FPT-ABF-20	1	
21	Feeding baffle	3K-12-FPT-ABF-21	1	
22	Cutter mounting block	3K-12-FPT-ABF-22	1	
23-	station induction baffle	3K-12-FPT-ABF-23	1	
24	Gasket1	3K-12-FPT-ABF-24	2	
25	card bullets1	3K-12-FPT-ABF-25	2	
26	Spring latch1	3K-12-FPT-ABF-26	1	
27	Spring5	3K-12-FPT-ABF-27	3	
28	induction film positioning pin	3K-12-FPT-ABF-28	1	
29	induction copper sheet	3K-12-FPT-ABF-29	1	
30	drive pin4	3K-12-FPT-ABF-30	1	
31	baffle positioning pin	3K-12-FPT-ABF-31	2	
32	Drive pin6	3K-12-FPT-ABF-32	1	

33	detection board	3K-12-FPT-ABF-33	1	
34	spring6	3K-12-FPT-ABF-34	1	
35	paper tape cutter	3K-12-FPT-ABF-35	1	
36	Sliding cutter	3K-12-FPT-ABF-36	1	
37	open outer gasket	3K-12-FPT-ABF-37	1	
38	open inner gasket	3K-12-FPT-ABF-38	1	
39	spring7	3K-12-FPT-ABF-39	1	
40	bearingFR62	3K-12-FPT-ABF-40	2	
41	Copper Washer	3K-12-FPT-ABF-41	1	
42	curved push piece	3K-12-FPT-ABF-42	1	
43	card bullets2	3K-12-FPT-ABF-43	1	
44	cylinder nut (M8)	3K-12-FPT-ABF-44	1	
45	M5X12screw	3K-12-FPT-ABF-45	6	
46	feeding sensor baffle seat	3K-12-FPT-ABF-46	1	
47	feeding sensor baffle seatA	3K-12-FPT-ABF-47	1	
48	cylinder connecting block	3K-12-FPT-ABF-48	1	
49	copper sheet	3K-12-FPT-ABF-49	1	
50	cover piece	3K-12-FPT-ABF-50	1	

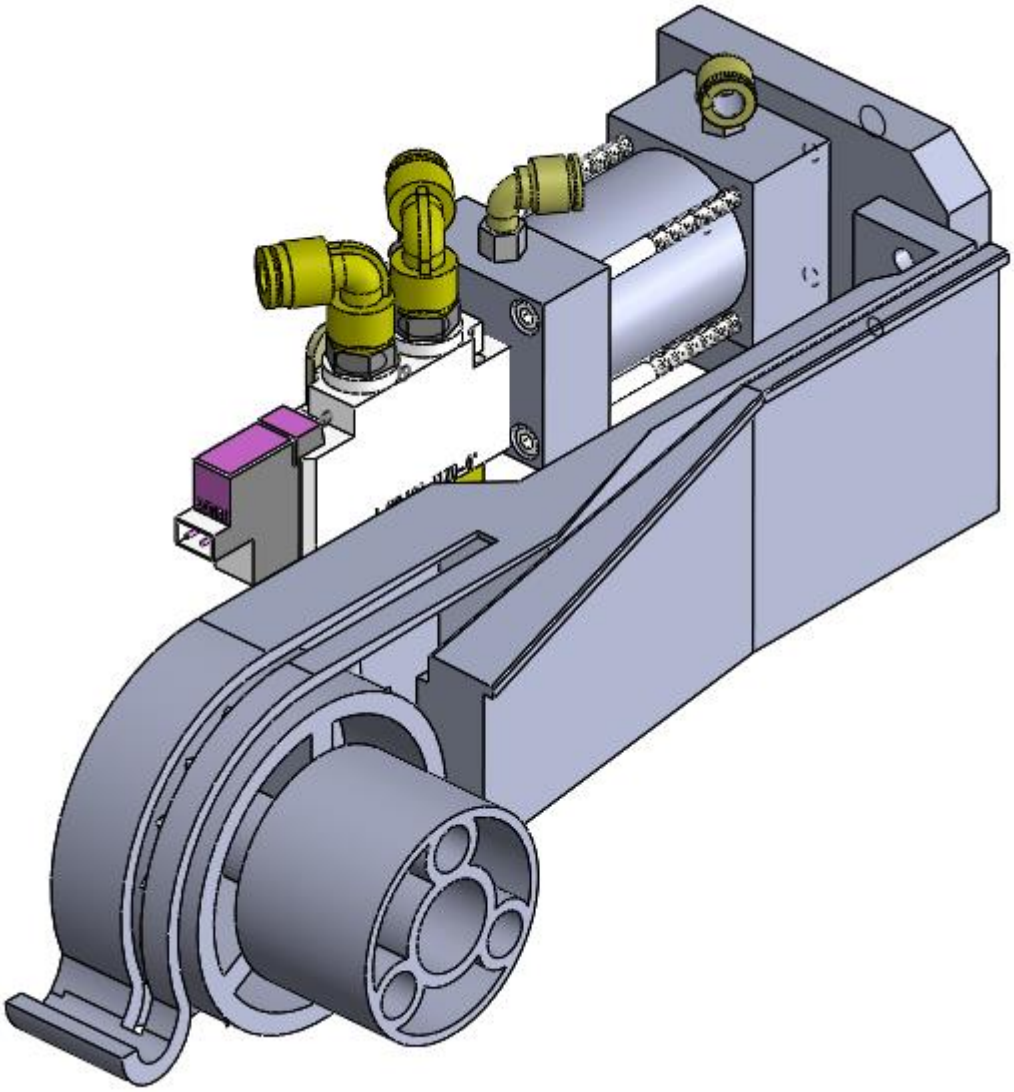
wearing parts fork-type pusher Exploded view and material list of the specifications of the:
10.0fork-typeExploded view of the pusher

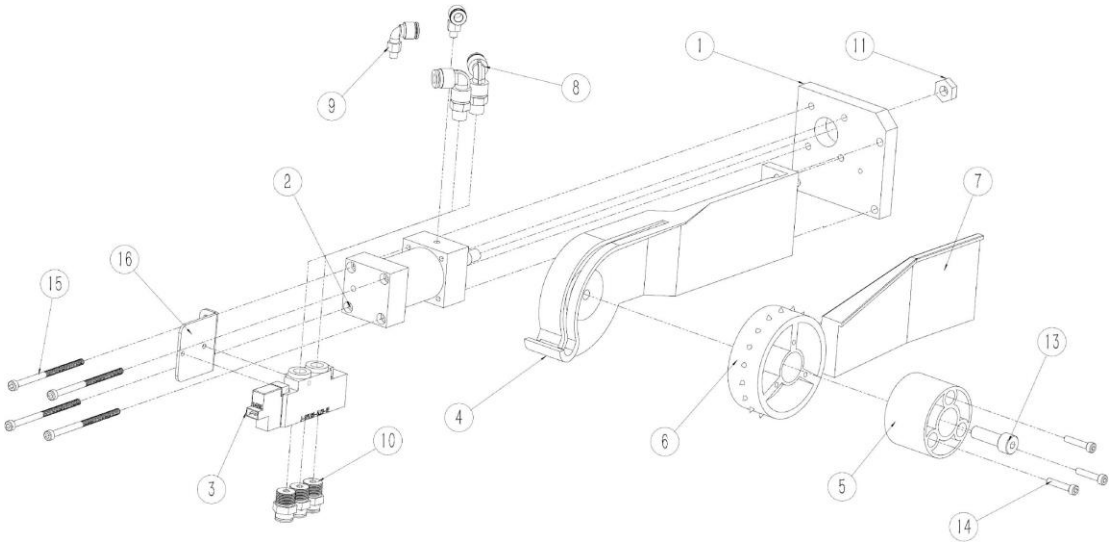


10.0Fork-typepush piece material list:

item number	part number	description	quantity	remarks
4	feeding slider	3K-12-FPT-ABF-04	1	
6	the tape pad	3K-12-FPT-ABF-		
11	Fork push plate	3K-12-FPT-ABF-11-10.0	1	2.5 5.0 7.5 3.5
31	Block positioning pin	3K-12-FPT-ABF-31	2	
36	Sliding cutter	3K-12-FPT-ABF-36	1	
42	curved push piece	3K-12-FPT-ABF-10.0	1	2.5 5.0 7.5 3.5
46	feeding sensor baffle seat	3K-12-FPT-ABF-46	1	
47	feeding sensor baffle seat	3K-12-FPT-ABF-47	1	

Distributing head part B exploded view

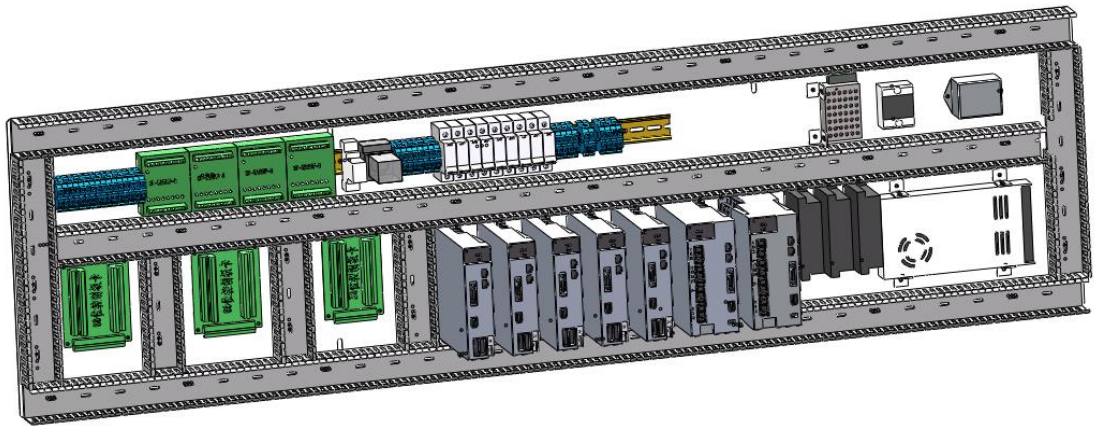


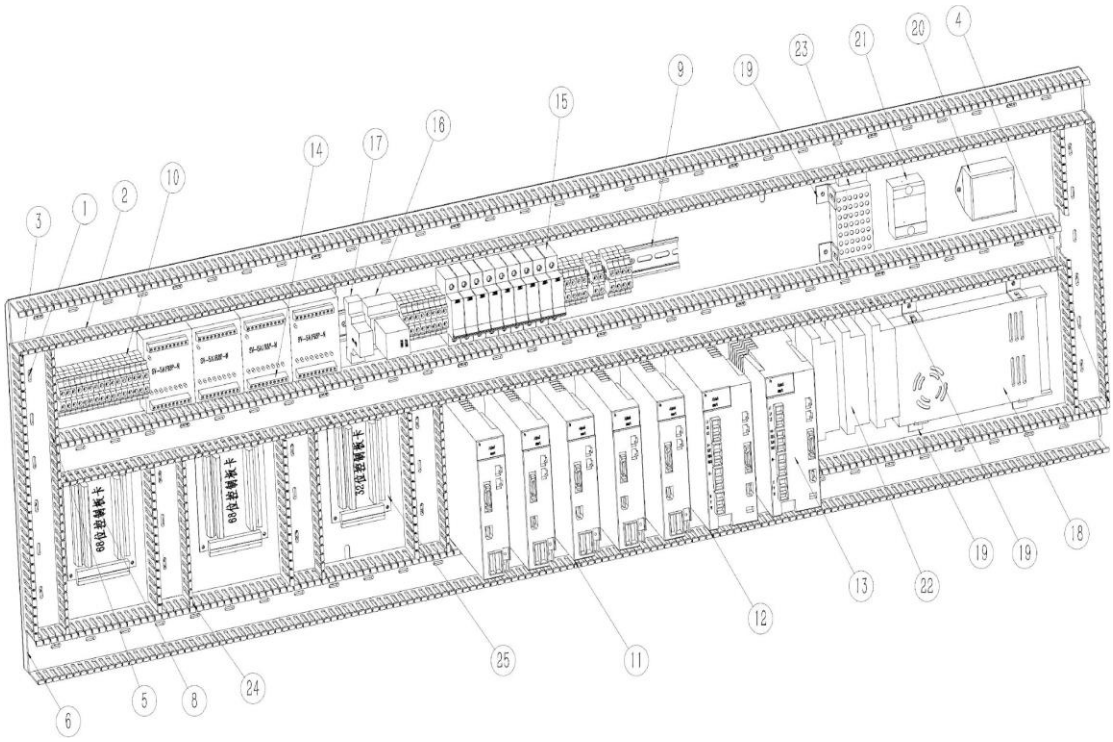


Distributing head part B material list

item number	part number	description	quantity	remarks
1	distribution head cylinder mounting plate	3K-12-FPT-BBF-01	1	
2	Dispensing cylinder head	A 3K-12-FPT-BBF		
3	Battery valve	3K-12-FPT-BBF-		
4	Plastic tape guiding element	3K-12-FPT-BBF-		
5	the tape guide wheel	1 3K-12-FPT-BBF		
6	the tape guide roller	3K-12-FPT-BBF-		
7	Plastic tape guide seat	1 3K-12-FPT-BBF		
8	steam pipe joint	3K-12-FPT-BBF-08	2	
9	Steam pipe joint1	3K-12-FPT-BBF-09	2	
10	Steam pipe joint2	3K-12-FPT-BBF-10	3	
11	Cylinder nut (M8)	3K-12-FPT-BBF-11	1	
12	M8Xscrew washer	3K-12-FPT-BBF-12	1	
13	M8X25screw	3K-12-FPT-BBF-13	1	
14	M4X20screw	3K-12-FPT-BBF-14	3	
15	M4X70screw	3K-12-FPT-BBF-15	4	
16	Solenoid valve fixing block	3K-12-FPT-BBF-16	1	

Vertical machine 12-station wiring board annotation diagram





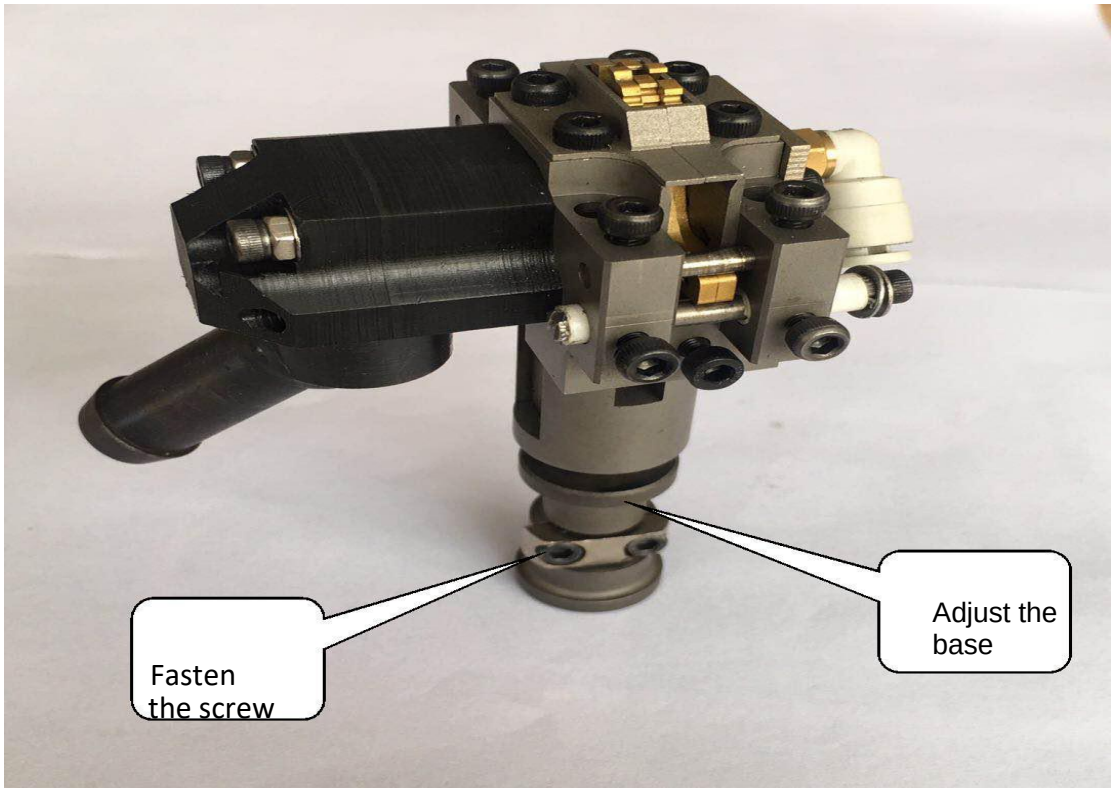
Vertical machine 12-station wiring board material list

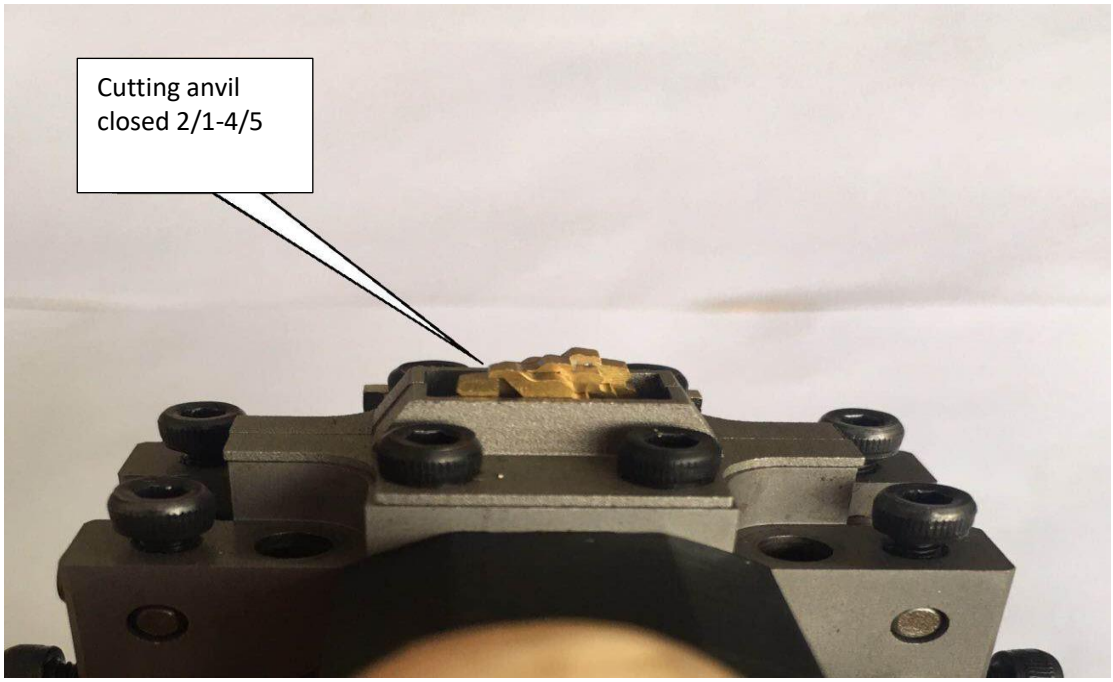
item number	part number	description	quantity	note
1	vertical front wiring board	3K-12-BXB-01	1	
2	wire slot1540	3K-12-BXB-02	1	
3	wire slot330	3K-12-BXB-03	2	
4	trough	330-2 3K-12-BXB-04		
5	wire slot1243	3K-12-BXB-05	1	
6	slot	1540-2 3K-12-BXB-06		
7	trunking178	3K-12-BXB-07	1	
8	68-bit wiring board	3K-12-BXB-08	2	
9	fixed slot	3K-12-BXB-09	1	
10	Terminal	3K-12-BXB-10	35	
11	400Wserver	3K-12-BXB-11	5	
12	750Wserver	3K-12-BXB-12	1	
13	1.5KWserver-TAID	3K-12-BXB-13	1	
14	SV-5A1R8P-N	3K-12-BXB-14	7	
15	CHNTswitchC10	3K-12-BXB-15	9	
16	OMRON MKS3P	3K-12-BXB-16	1	
17	G2R-1-SN(S)	3K-12-BXB-17	1	
18	24Vpower supply	3K-12-BXB-18	1	
19	24Vpower supply mount	3K-12-BXB-19	6	sheet metal parts
20	filter220V	3K-12-BXB-20	1	
21	Solid State Relay	3K-12-BXB-21	1	
22	drives DM542C	3K-12-BXB-22	3	
23	12VNWpower supply	3K-12-BXB-23	1	
24	wire slot168	3K-12-BXB-24	3	
25	32-bit wiring board	3K-12-BXB-25	1	

Machine maintaining

1. Cutting anvil adjustment

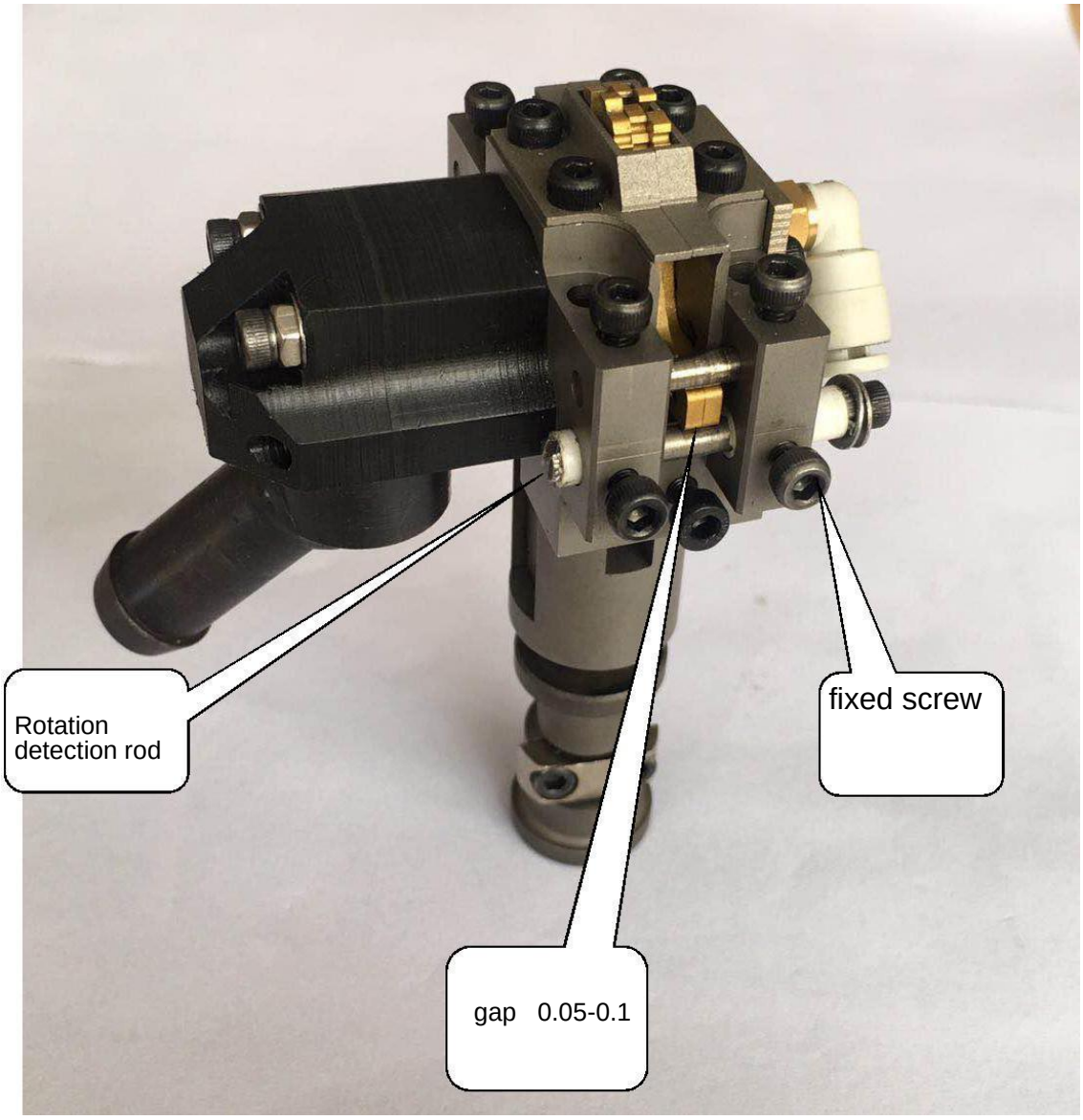
(1). Loosen the fixing screw of the adjusting seat and adjust the adjusting seat so that Close the foot cutter upwards 1/2-4/5 and tighten the fixing screws.





52,the shear pin is detected shear pin adjustment, loosen the the detection rod

Fixing screw to adjust so that the eccentric pin between the fixed blade screwdriver blade contact surface of the detection rod from 0.05 0.1mmgap.



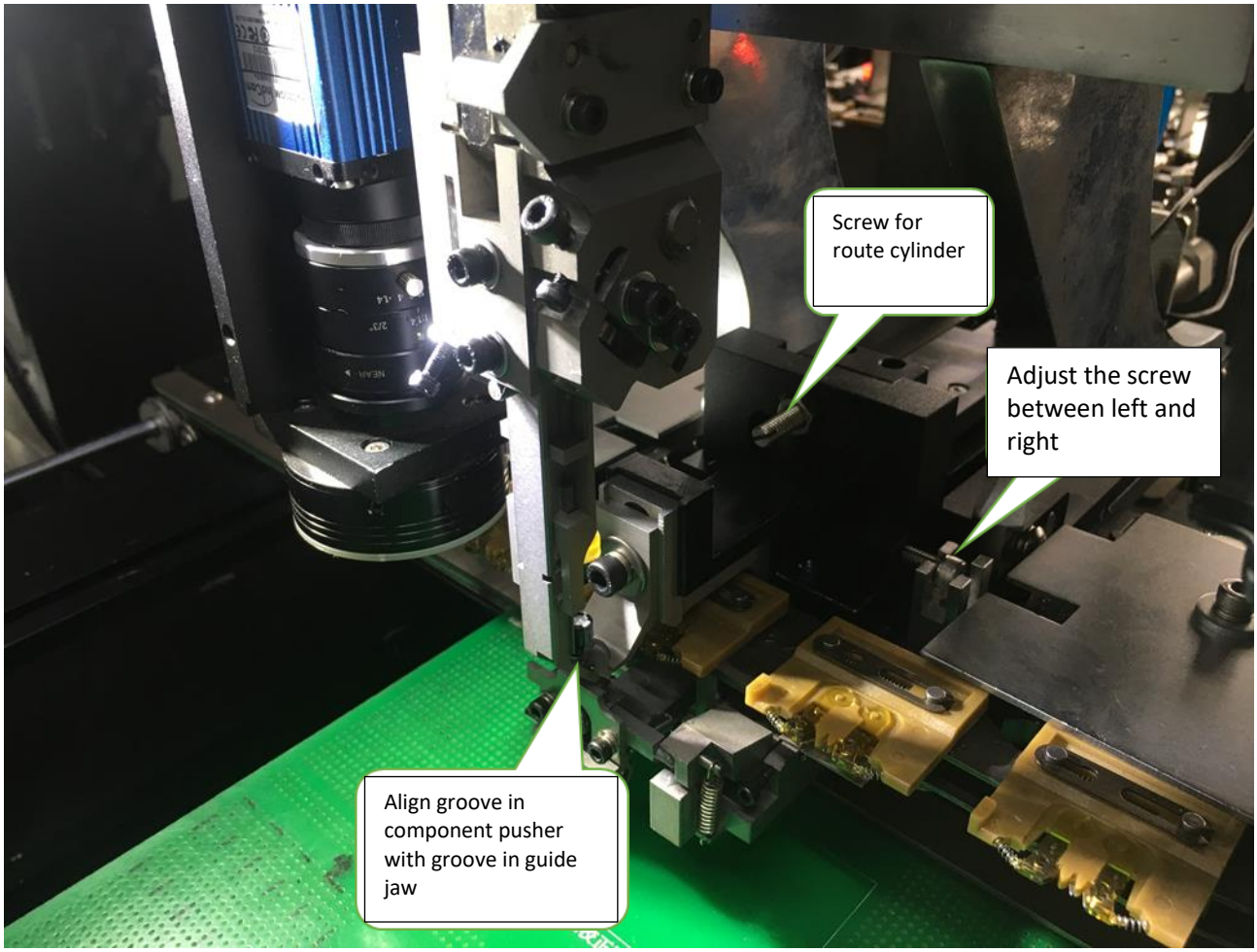
2. CTA adjustment

(1). CTA removal Remove

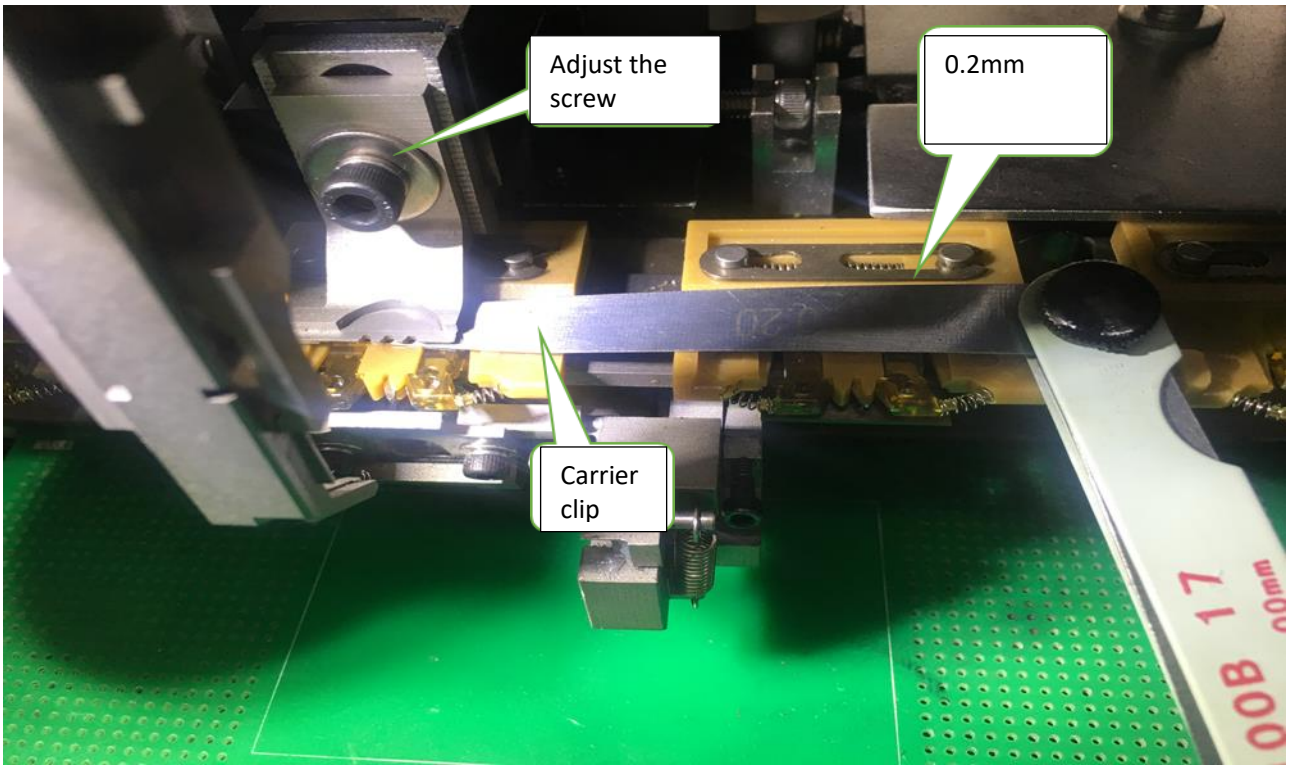
1.the L axis chain from the CTA position, remove the CTA air pipe and photoelectric switch line, and then remove the at the bottom of the CTA three M6 screws from the machine (The entire CTA is removed from the machine).

(2). CTA position adjustment

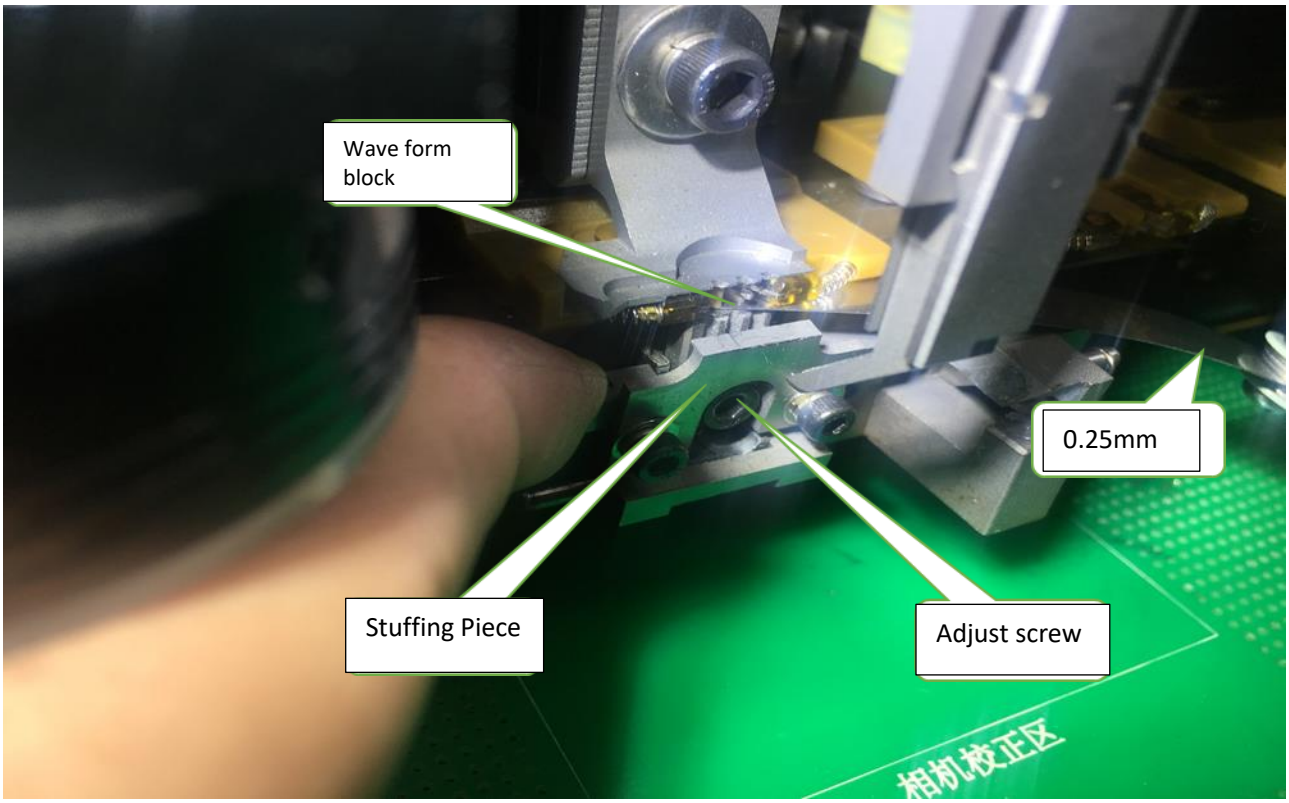
1. Slightly loosen the three M6 screws at the bottom of the left and right adjustment screws to align the curved push fork groove with the groove of the main claw, and then adjust the CTA cylinder The stroke screw is just pushed onto the main jaw and the component is not deformed.



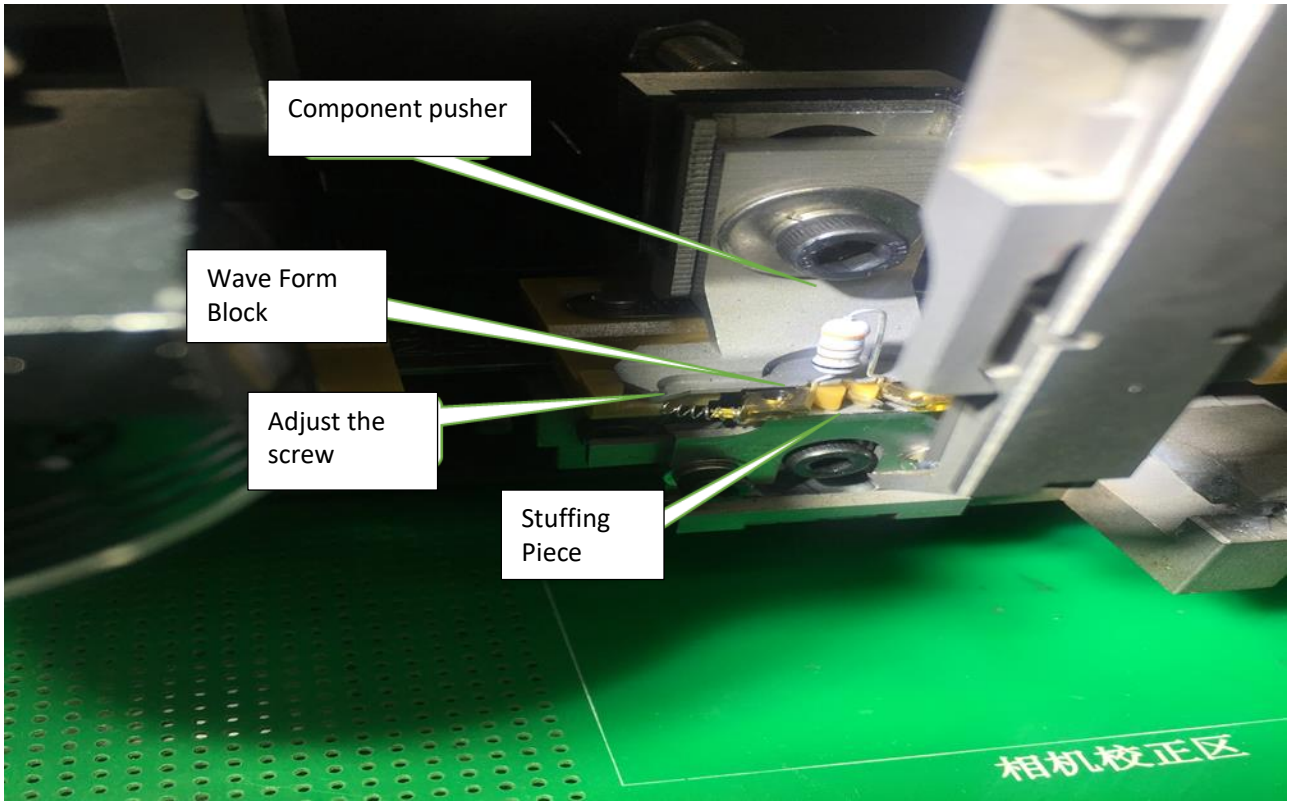
2. Loosen the curved push fork screw to adjust the surface of the curved push fork and the chain clamp to 0.2mm.



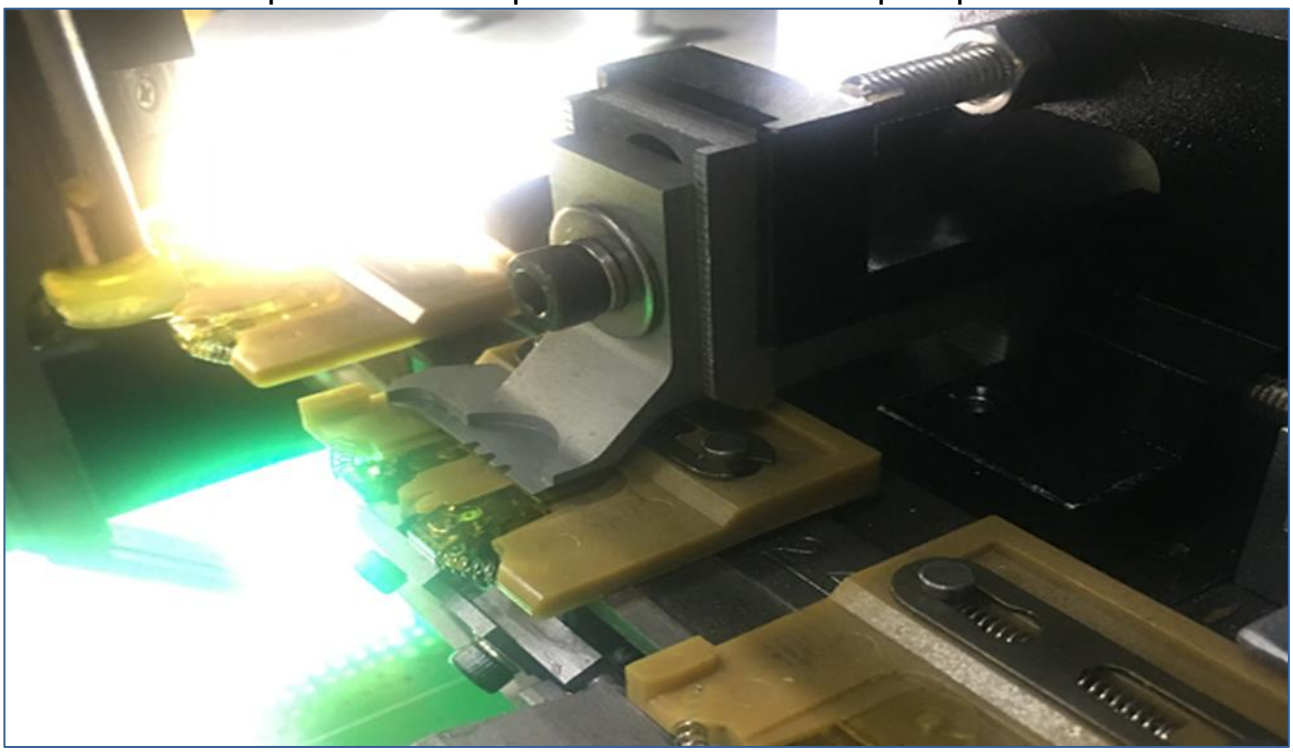
3.Adjust the bottom surface of the feed slot and the chain clip by 0.25 mm, and at the same time make the clip and the feed slot have the same height.



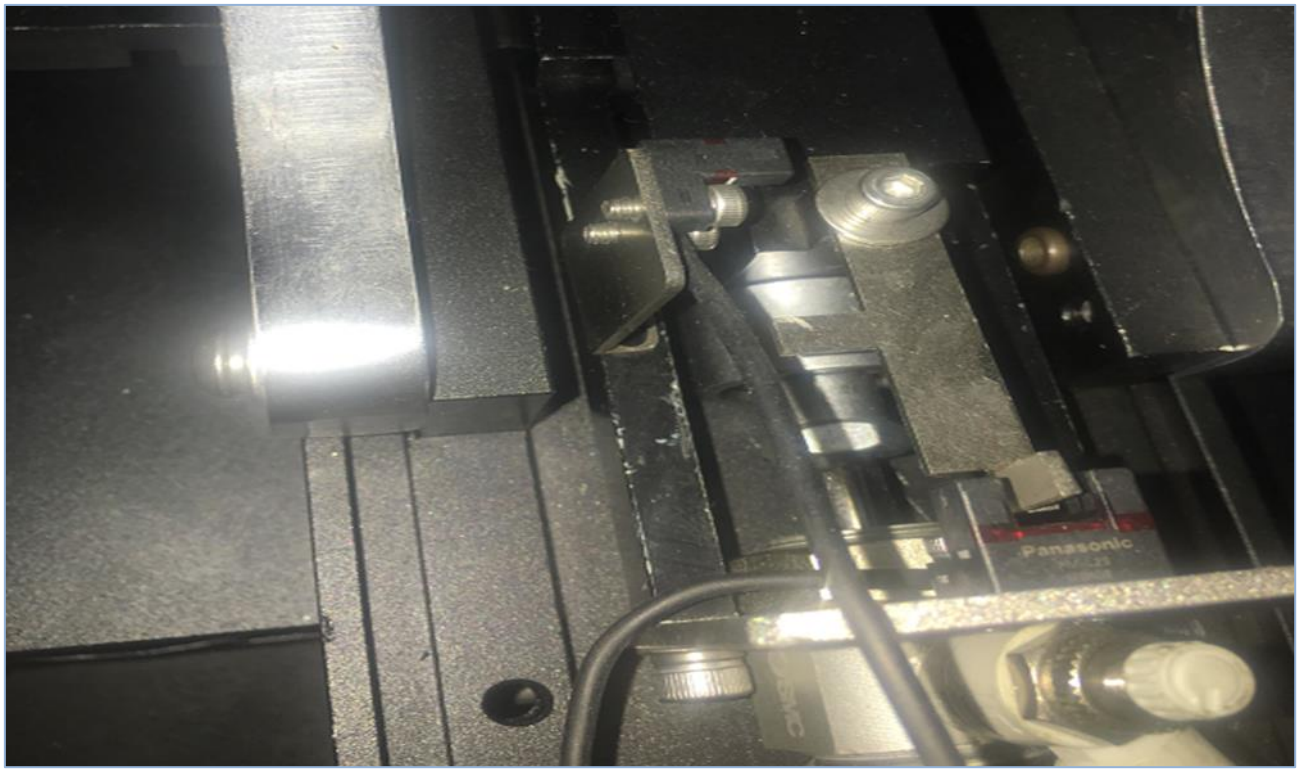
4. Adjust the screw to make When feeding, the pusher fork, the feeding slot piece, and the material clamping piece clamp the component feet at the same time.



5. Adjust the pusher cylinder to return to the origin. The distance between the pusher fork slope and the chain clamp slope is1.5mm.



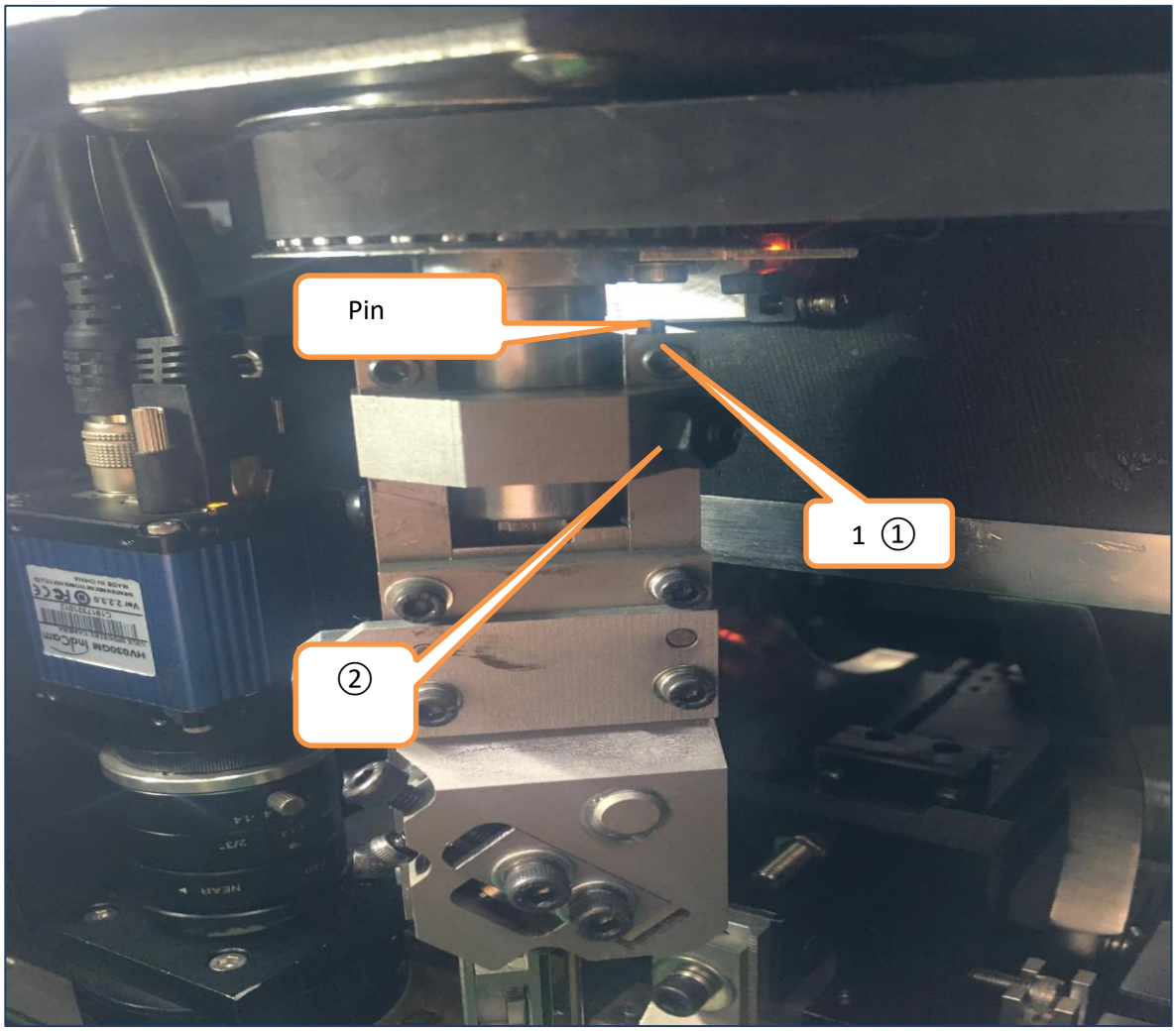
7. or adjust the home position sensor chip can sense just right, CTA launched 1mm sensor lights, adjust the CTA position The sensor seat makes the sensor plate just sense the in-position sensor (note: the origin sensor and the in-position sensor cannot be sensed in advance)



3. Insertion head adjustment

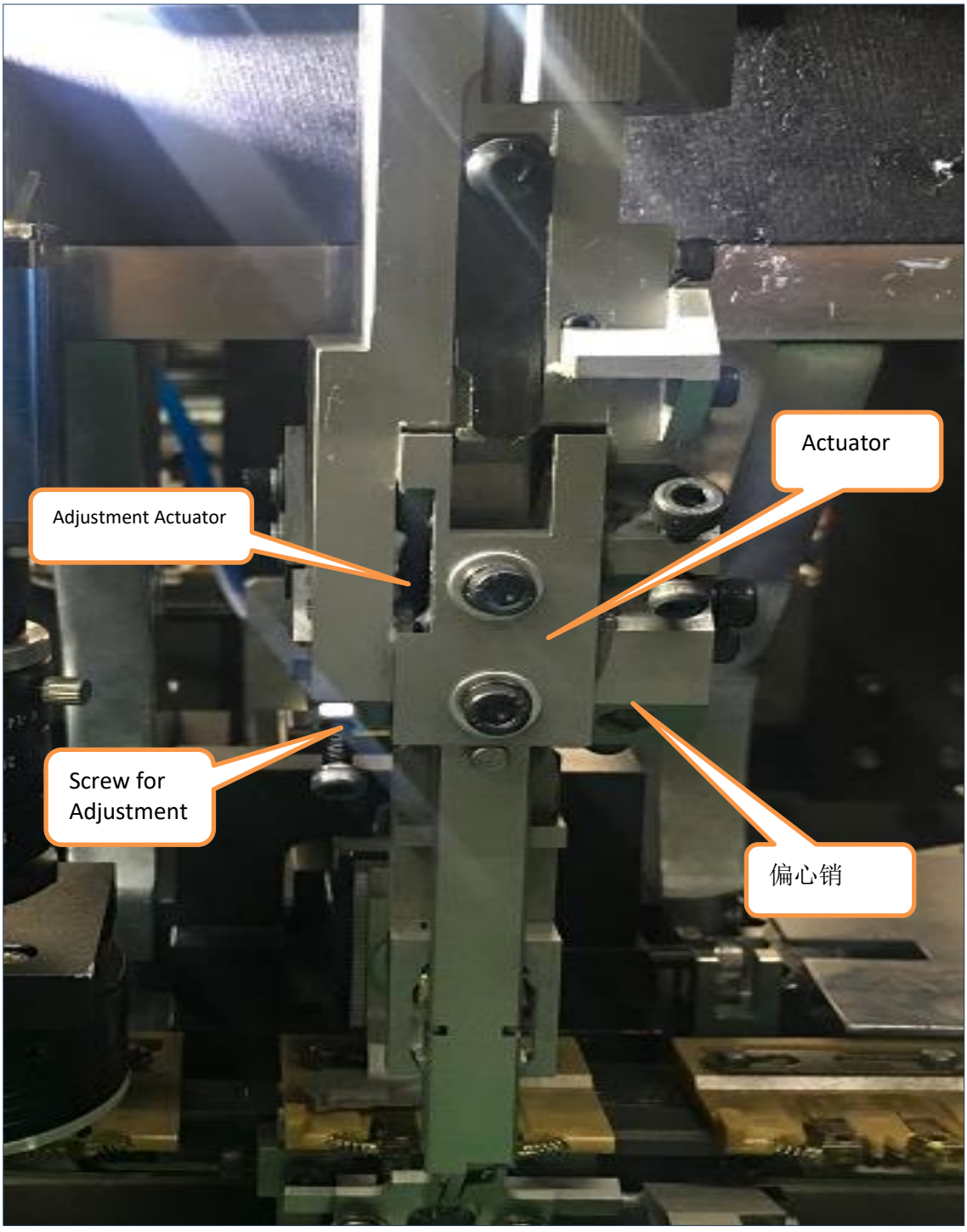
(1)Insertion head disassembly

press emergency stop, loosen the plug-in head machine screw ①, then loosen the screw ②, then take out the pin, and then take it off.

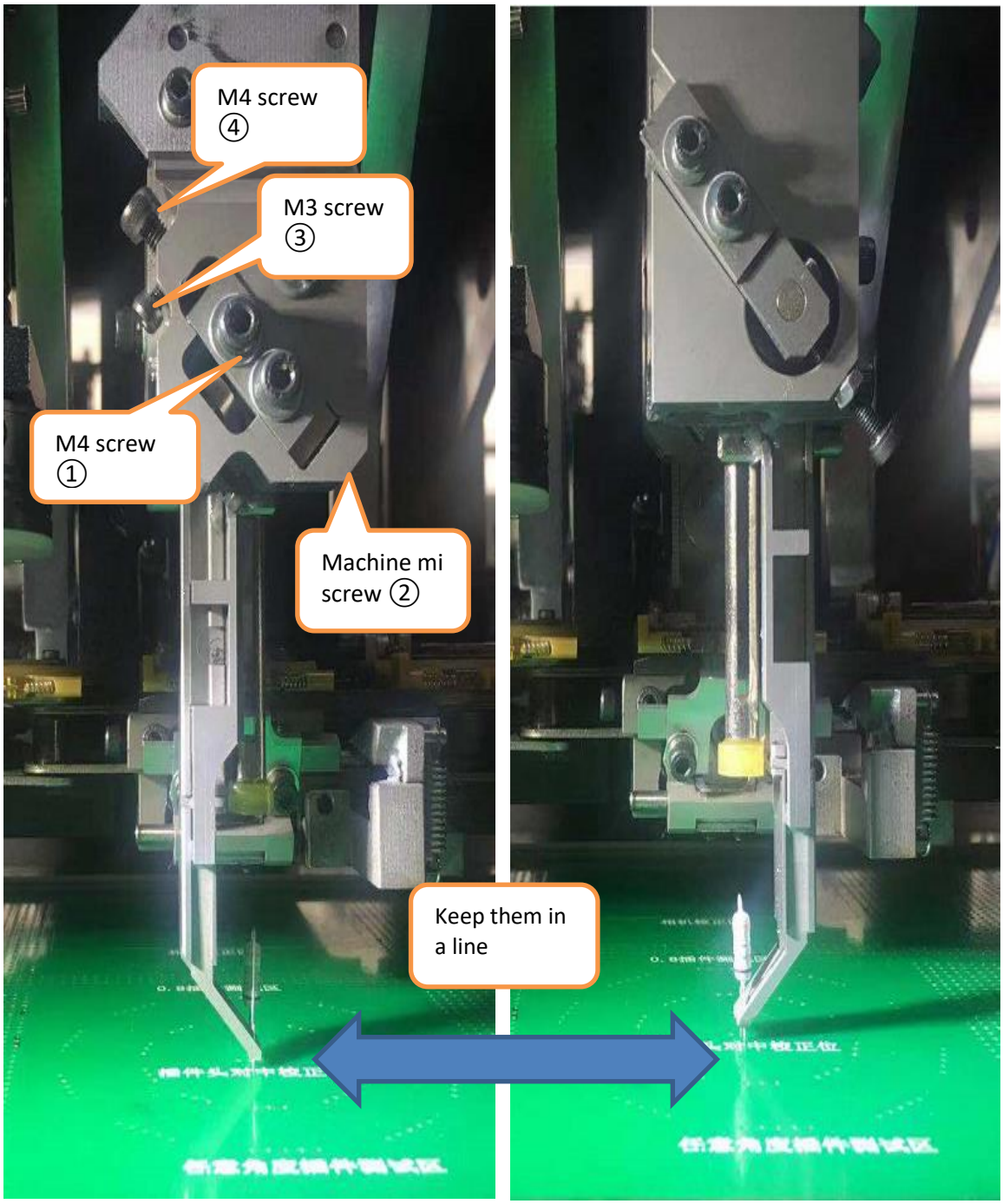


(2)Adjust the tightness of the insertion head

1. Use a flat-blade screwdriver to adjust the eccentric pin so that there is no swing left and right, and the triangle slide block goes up and down smoothly. Adjust the adjusting block screw to make the triangle slide block no swing.

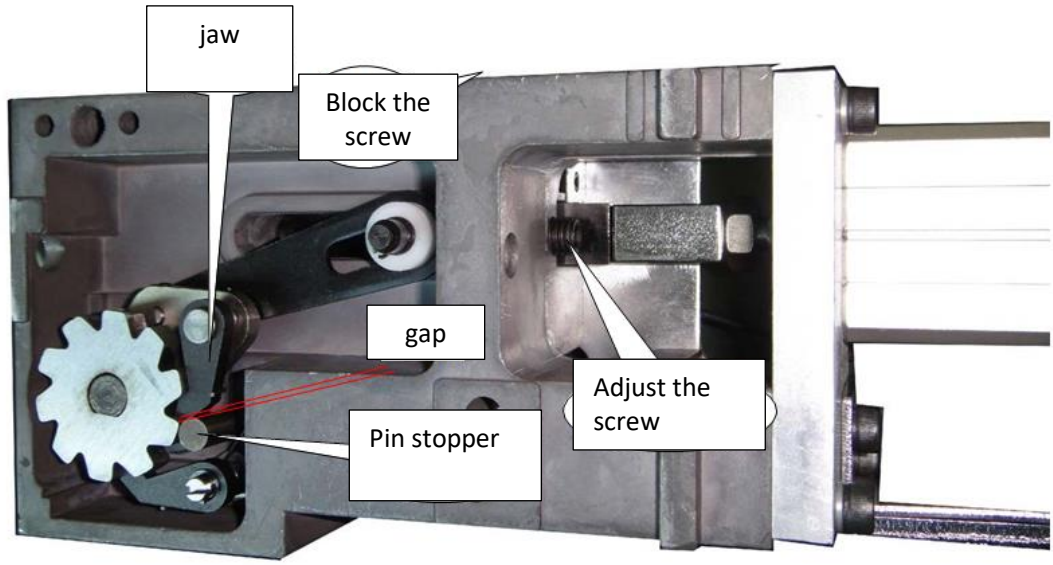


2. Loosen the two M4 screws①, loosen the M3 machine screw ②, loosen the M3 screw ③, and then adjust the M4 screw ④ to press the triangle slider to the end. The workbench is loaded with a plate CTA to send a 5.0mm material, rotate the D axis 90 degrees to move the workbench so that the component is just inserted into the hole, and then rotate the D axis to -90 degrees, adjust the machine screw ②, M4 screw ④ to make it straight Negative 90 degrees are all in a straight line and can be inserted into the hole at the same time.

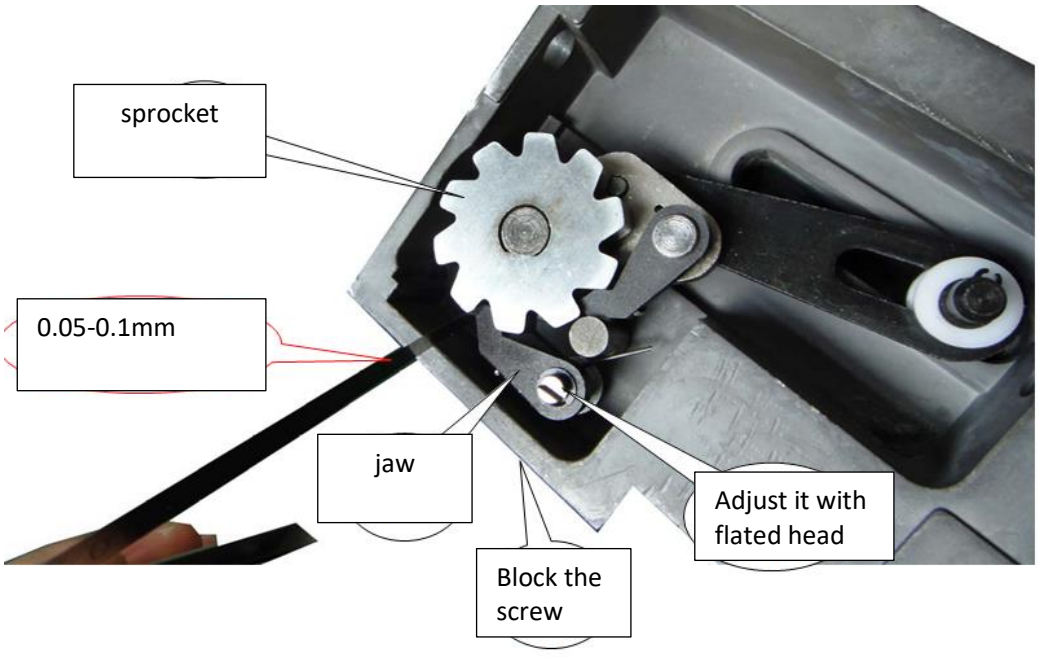


4. Feeder adjustment

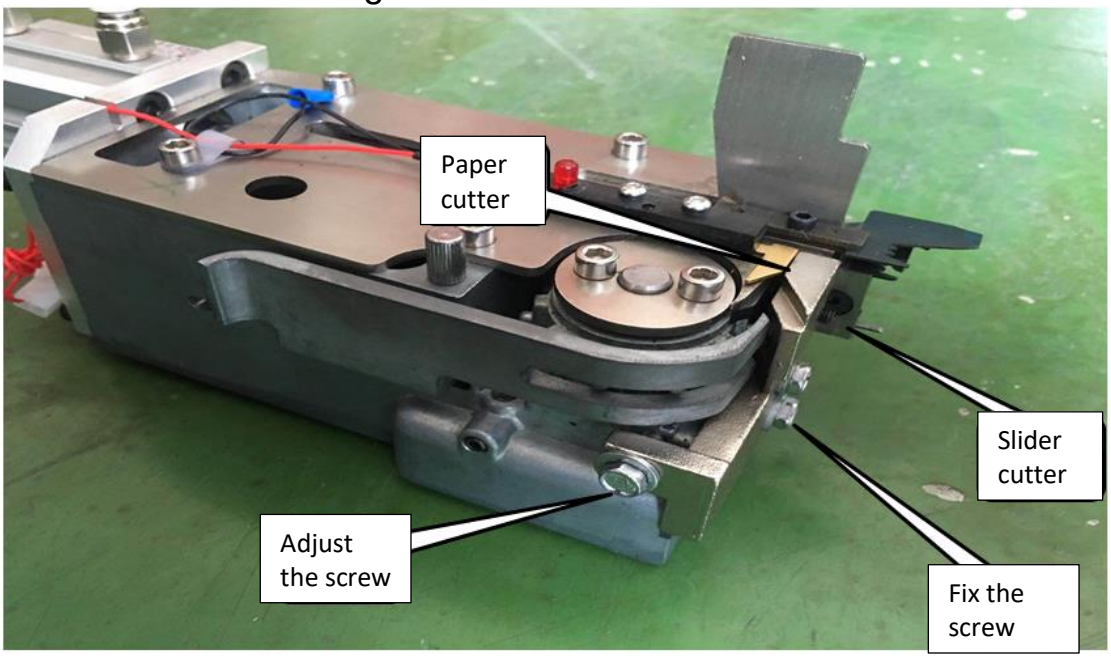
(1).Upper the bottom of the distribution head, adjust the main slider back (8mm) so that the spacing between the pawl and the stop pin is 0.01-0.05mm, and lock the plane meter.(Adjust to the figure below)



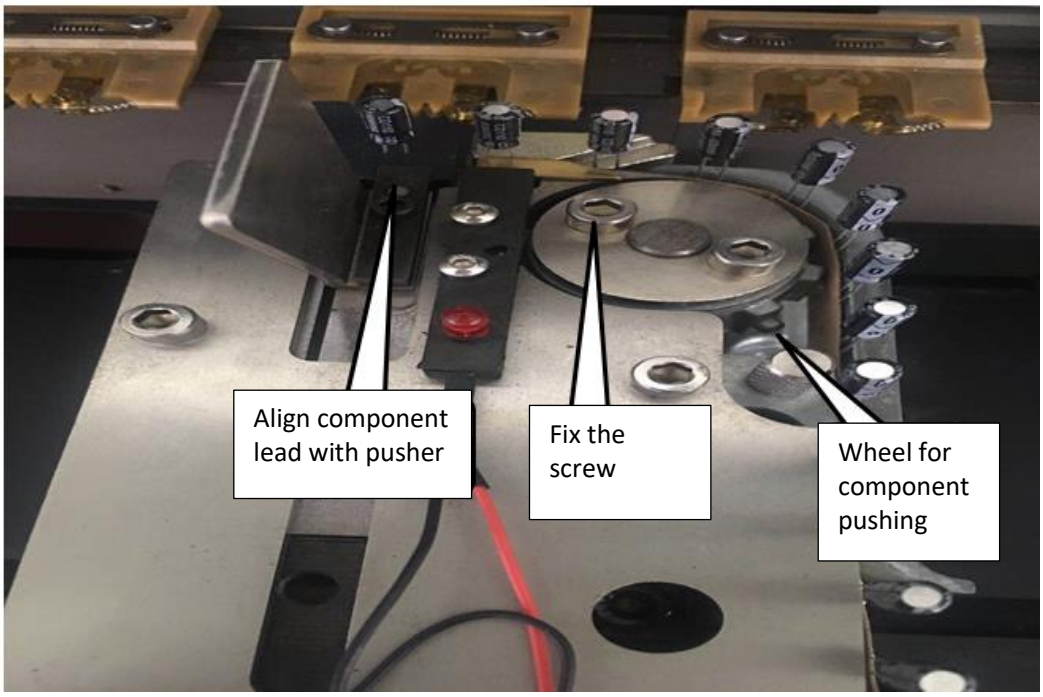
(2).Use a one-word screwdriver to adjust the 0.05-0.1mm gap between the eccentric claw and the ratchet, and lock the plane meter.



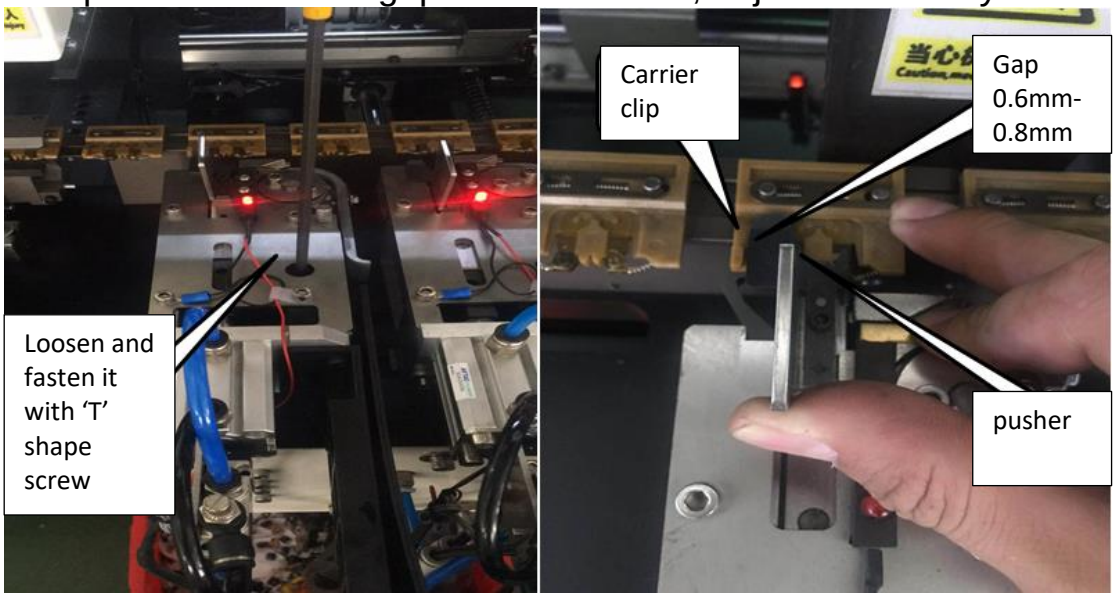
(3).Push the main slider, adjust the screws so that the gap between the slider cutter and the paper tape cutter is 0.038mm, and the main slider can be pushed out smoothly before and after, and then lock the fixing screws



(4).Release the two fixing screws on the retaining main wheel to align the corresponding material foot with the station fork push plate and lock the fixing screw (if 5.0mm, subject to 5.0 on the left).



(5).First, reset to confirm that the L axis chain releases the fly lock screw at the origin position, so that the push fork and the chain clamp contact surface gap 0.6mm-0.8mm, adjust the lock fly.



(6).Adjust the cylinder stroke, loosen the cylinder nut, drive the solenoid valve manual switch, so that the material just sent to the chain clip while the element can manually move up and down with a little resistance and no element foot change

S3010A Radial Insertion Machine The first board X1 interface wiring diagram

Lead No.	The original name	Signal Name	Wire Code	Lead No.	The original name	Signal Name	Wire Code
1	EXGND	GND		35	PULO+	D1 pulse positive	D1M+
2	PULO+	X pulse is	XM+	36	PULO-	D1 pulse negative	D1M-
3	PULO-	X pulse negative	XM-	37	DIRO+	D1 direction is positive	D1F+
4	DIRO+	X direction is	XF+	38	DIRO-	D1 Negative direction	D1F-
5	DIRO-	X direction negative	XF-	39	PULO+	D2 pulse positive	D2M+
6	PULO+	Y pulse is	YM+	40	PULO-	D2 pulse negative	D2M-
7	PULO-	Y pulse is	YM-	41	DIRO+	D2 direction is positive	D2F+
8	DIRO+	Y direction is	YF+	42	DIRO-	D2 direction negative	D2F1
9	DIRO-	Y direction negative	YF-	43	OUT 1	Left lift cylinder	X1O1
10	EL0+	X limit signal is positive	X+	44	OUT 2	Left lift belt motor	X1O2
11	EL0-	X limit signal negative	X-	45	OUT 3	Right lift cylinder	X1O3
12	SD0+	X deceleration signal is positive		46	OUT 4	Right lift belt motor	X1O4
13	SD0-	X deceleration signal negative		47	OUT 5	Send the board to the last request	X1O5
14	ORG0	X origin signal	XO	48	OUT 6	PCB positioning cylinder	X1O6
15	EL0+	The Y limit signal is positive	Y+	49	OUT 7	work light	X1O7
16	EL0-	The Y limit signal is negative	Y-	50	OUT 8	Cut foot seat	X1O8
17	SD0+	Y deceleration signal is positive		51	OUT 9	Cut your feet	X1O9
18	SD0-	Y deceleration signal negative		52	OUT 10	PCB limit cylinder	X1O10
19	ORG0	Y origin signal	YO	53	OUT 11	Workbench belt motor	X1O11
20	EL0+			54	OUT 12	Camera lamp	X1O12
21	EL0-			55	IN 5	Left lift table cylinder is in its original position	X1IN5
22	SD0+			56	IN 6	Left lift cylinder in place	X1IN6
23	SD0-			57	IN 7	Right lift table cylinder is in its original position	X1IN7
24	ORG0	D1 origin	D1O	58	IN 8	Right lift cylinder in place	X1IN8
25	EL0+	D2 ELZ		59	IN 9	Receiving the next section of the request delivery board	X1IN9
26	EL0-	D2 ELF		60	IN 10	open	X1IN10

27	SD0+			61	IN 11	cease	X1IN11
28	SD0-			62	IN 12	head	X1IN12
29	ORG0	D2 origin		63	IN 13	Manual cutting feet	X1IN13
30	IN 1	Left lift table PCB1	X1IN1	64	IN 14	emergency stop	X1IN14
31	IN 2	Right lift table pcb1	X1IN2	65	IN 15		
32	IN 3	Left lift table PCB2	X1IN3	66	EXGND	GND	
33	IN 4	Right lift table pcb2	X1IN4	67	E24	24V VCC	
34	EXGND	GND		68	IN 16	exit	X1IN16

S3010A Radial Insertion Machine The second board X1 interface wiring diagram

Lead No.	The original name	Signal Name	Wire Code	Lead No.	The original name	Signal Name	Wire Code
1	EXGND	GND		35	PULO+	1	EXGND
2	PULO+	H pulse is	XM+	36	PULO-	2	PULO+
3	PULO-	H pulse negative	XM-	37	DIRO+	3	PULO-
4	DIRO+	H direction is	XF+	38	DIRO-	4	DIRO+
5	DIRO-	H direction negative	XF-	39	PULO+	5	DIRO-
6	PULO+	P pulse is	YM+	40	PULO-	6	PULO+
7	PULO-	P pulse negative	YM-	41	DIRO+	7	PULO-
8	DIRO+	P direction is	YF+	42	DIRO-	8	DIRO+
9	DIRO-	P direction negative	YF-	43	OUT 1	9	DIRO-
10	EL0+	H limit signal is positive	X+	44	OUT 2	10	EL0+
11	EL0-	The H limit signal is negative	X-	45	OUT 3	11	EL0-
12	SD0+			46	OUT 4	12	SD0+
13	SD0-			47	OUT 5	13	SD0-
14	ORG0	H origin signal	HO	48	OUT 6	14	ORG0
15	EL0+	P limit signal positive	Z+	49	OUT 7	15	EL0+
16	EL0-	P limit signal negative	Z-	50	OUT 8	16	EL0-
17	SD0+			51	OUT 9	17	SD0+
18	SD0-			52	OUT 10	18	SD0-
19	ORG0	P origin signal	ZO	53	OUT 11	19	ORG0
20	EL0+			54	OUT 12	20	EL0+
21	EL0-			55	IN 5	21	EL0-
22	SD0+			56	IN 6	22	SD0+
23	SD0-			57	IN 7	23	SD0-
24	ORG0	L origin	LO	58	IN 8	24	ORG0

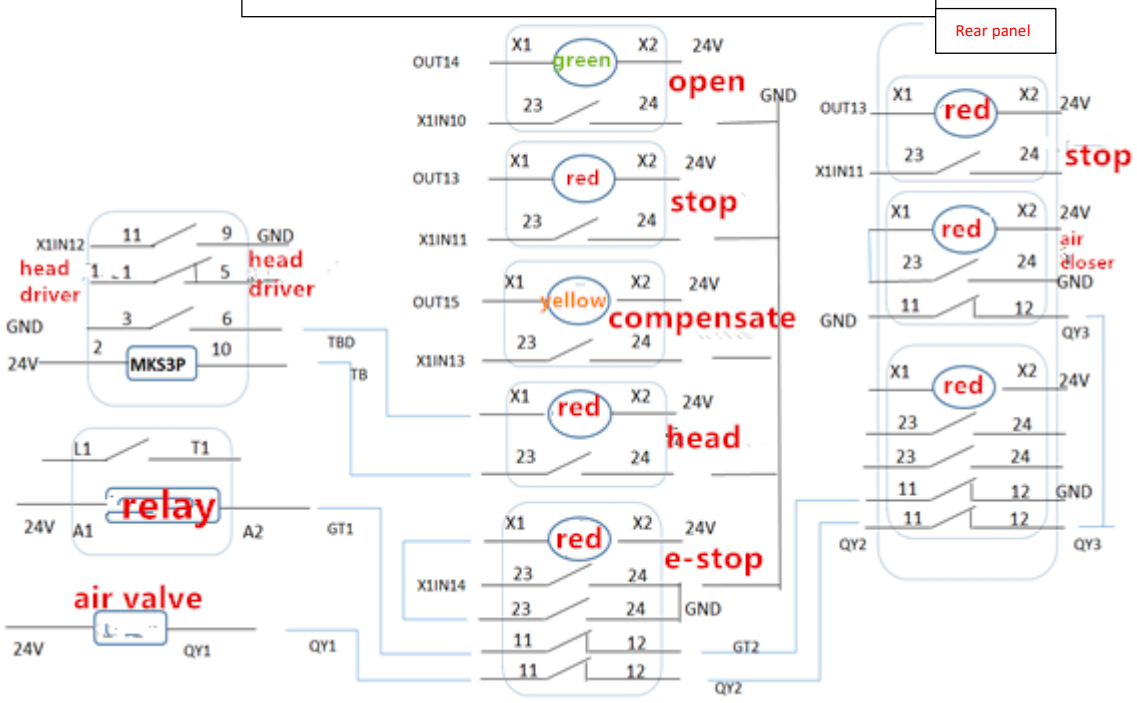
25	EL0+			59	IN 9	25	EL0+
26	EL0-			60	IN 10	26	EL0-
27	SD0+			61	IN 11	27	SD0+
28	SD0-			62	IN 12	28	SD0-
29	ORG0			63	IN 13	29	ORG0
30	IN 1	PCB put sth. in place	X2IN1	64	IN 14	30	IN 1
31	IN 2	The PCB was positioned successfully	X2IN2	65	IN 15	31	IN 2
32	IN 3			66	EXGND	32	IN 3
33	IN 4			67	E24	33	IN 4
34	EXGND	GND		68	IN 16	34	EXGND

S3010A Radial Insertion Machine The first board J1 interface wiring diagram

Lead No.	The original name	Signal Name	Wire Code	Lead No.	The original name	Signal Name	Wire Code
1	IN17	Whether there is material induction in no. 1 feeding station	J1IN1	20	GND		
2	IN18	There is no material induction in No.2 feeding station	J1IN2	21	OUT13	red lantern	J1O1
3	IN19	There is no material induction in no. 3 feeding station	J1IN3	22	OUT14	green light	J1O2
4	IN20	Whether there is material induction in no. 4 feeding station	J1IN4	23	OUT15	yellow light	J1O3
5	IN21	No.5 feed delivery station has no material induction	J1IN5	24	OUT16	buzzer	J1O4
6	IN22	Whether there is material induction in no. 6 feeding station	J1IN6	25	OUT17	Cut the front cylinder of paper	J1O5
7	IN23	Whether there is material induction in no. 7 feeding station	J1IN7	26	OUT18	Insertion head position indicator lamp	J1O6
8	IN24	No.8 feeding station has no material induction	J1IN8	27	OUT19	Pick up the material reminder	J1O7
9	IN25	Whether there is material induction in no. 9 feeding station	J1IN9	28	OUT20	Abnormal feeder reminder	J1O8
10	IN26	Whether there is material induction in no. 10 feeding station	J1IN10	29	OUT21		J1O9
11	IN27	There is no material induction in No.11 feeding station		30	OUT22		J1O10
12	IN28	There is no material induction in No.12 feeding station		31	OUT23		J1O11
13	IN29			32	OUT24		J1O12
14	IN30			33	OUT25		J1O13
15	IN31			34	OUT26	Paid No.11	J1O14
16	IN32			35	OUT27	No.12 feeder	J1O15

17	3.3V			36			
18	3.3V			37	GND		
19	GND						

Button wire connection diagram



S3020A Radial Insertion Machine First board X1 interface wiring diagram

Lead No.	The original name	Signal Name	Wire Code	Lead No.	The original name	Signal Name	Wire Code
1	EXGND	GND		35	PULO+	Steering D1 shaft pulse is positive	D1P+
2	PULO+	Platform X pulse positive	XP+	36	PULO-	Steering D1 shaft pulse is positive	D1P-
3	PULO-	Platform X pulse negative	XP-	37	DIRO+	Steering D1 is direction	D1F+
4	DIRO+	Platform X direction is positive	XF+	38	DIRO-	Steering D1 axis is negative	D1F-
5	DIRO-	Platform X direction negative	XF-	39	PULO+	Steering D2 shaft pulse is positive	D2P+
6	PULO+	Platform Y pulse positive	YP+	40	PULO-	Steering D2 shaft pulse is positive	D2P-
7	PULO-	Platform Y pulse positive	YP-	41	DIRO+	Steering D2 is direction	D2F+
8	DIRO+	Platform Y direction is positive	YF+	42	DIRO-	Steering D2 axis is negative	D2F-

9	DIRO-	The platform Y direction is negative	YF-	43	OUT 1	CTA feed cylinder	X1O1
10	EL0+	The Platform X limit signal is positive	XEL+	44	OUT 2	Cut foot seat	X1O2
11	EL0-	The Platform X limit signal is negative	XEL-	45	OUT 3	Cut your feet	X1O3
12	SD0+			46	OUT 4	buzzer	X1O4
13	SD0-			47	OUT 5		
14	ORG0	Platform X origin signal	XORG	48	OUT 6		
15	EL0+	The Platform Y limit signal is positive	YEL+	49	OUT 7		
16	EL0-	The Platform Y limit signal is negative	YEL-	50	OUT 8	Camera switch lamp	X1O8
17	SD0+			51	OUT 9	red lantern	X1O9
18	SD0-			52	OUT 10	yellow light	X1O10
19	ORG0	Platform Y origin signal	YORG	53	OUT 11	green light	X1O11
20	EL0+	Steering D1 shaft limit signal is positive	D1EL+	54	OUT 12	Work desk lamp	X1O12
21	EL0-	Steering D1 shaft limit signal is negative	D1EL-	55	IN 5		
22	SD0+			56	IN 6	Sheet cylinder in place	X1IN6
23	SD0-			57	IN 7		
24	ORG0	Steering D1 axis origin signal	D1ORG	58	IN 8	Plug-in axis return	X1IN8
25	EL0+	Steering D2 axis limit signal is positive	D2EL+	59	IN 9		
26	EL0-	Steering D2 shaft limit signal is negative	D2EL-	60	IN 10	firing	X1IN10
27	SD0+			61	IN 11	Stop production (stop production)	X1IN11
28	SD0-			62	IN 12	Emergency stop (emergency stop)	X1IN12
29	ORG0	Steering D2 axis origin signal	D2ORG	63	IN 13	CTA push cylinder in place	X1IN13
30	IN 1	Inspection of the left	X1IN1	64	IN 14	CTA feed cylinder in situ	X1IN14
31	IN 2	Check the right	X1IN2	65	IN 15	Cut the foot signal manually	X1IN15
32	IN 3	Shorter seat low	X1IN3	66	EXGND	GND	
33	IN 4			67	E24	24V VCC	
34	EXGND	GND		68	IN 16	exit	X1IN16

S3020A Radial Insertion Machine Second board X1 interface wiring diagram

Lead No.	The original name	Signal Name	Wire Code	Lead No.	The original name	Signal Name	Wire Code
01	EXGND	GND		35	PULO+	The Chain L-axis pulse is positive	LP+
02	PULO+	Plug-in H-axis pulse is positive	HP+	36	PULO-	Chain L-axis pulse is negative	LP-
03	PULO-	Plug-in H-axis pulse is negative	HP-	37	DIRO+	The chain L-axis direction is positive	LF+
04	DIRO+	Plug-in H-axis direction is positive	HF+	38	DIRO-	Chain L-axis direction is negative	LF-
05	DIRO-	Plug-in H-axis direction is negative	HF-	39	PULO+		
06	PULO+	The ballast P-axis pulse is positive	PP+	40	PULO-		
07	PULO-	The ballast P-axis pulse is positive	PP-	41	DIRO+		
08	DIRO+	Compress P axis is in a positive direction	PF+	42	DIRO-		
09	DIRO-	The ballast P-axis direction is negative	PF-	43	OUT 1	Workbench belt	X2O1
10	EL0+	Plug-in H-axis limit signal is positive	HEL+	44	OUT 2	Left lift belt	X2O2
11	EL0-	Plug-in H-axis limit signal is negative	HEL-	45	OUT 3	Right lift belt	X2O3
12	SD0+			46	OUT 4	Left lift cylinder	X2O4
13	SD0-			47	OUT 5	Right lift cylinder	X2O5
14	ORG0	Plug-in H-axis origin signal	HORG	48	OUT 6	PCB positioning 1	X2O6
15	EL0+	Compression material P-axis limit signal is positive	PEL+	49	OUT 7	Send the board to the last request	X2O7
16	EL0-	The press material P axis limit signal is negative	PEL-	50	OUT 8	PCB positioning 2	X2O8
17	SD0+			51	OUT 9		
18	SD0-			52	OUT 10		
19	ORG0	Origin signal of the ballast P-axis	PORG	53	OUT 11		
20	EL0+	Chain L-axis limit signal is positive	LEL+	54	OUT 12		
21	EL0-	Chain L-axis limit signal is negative	LEL-	55	IN 5	PCB put sth. in place	X2IN 5
22	SD0+			56	IN 6	PCB fixed position	X2IN 6
23	SD0-			57	IN 7	Left lift table left section pcb	X2IN 7
24	ORG0	Chain L-axis origin signal	LORG	58	IN 8	Right p left pcb	X2IN 8
25	EL0+			59	IN 9	Left lift table and right section pcb	X2IN 9
26	EL0-			60	IN 10	Right lift table right section pcb	X2IN 10
27	SD0+			61	IN 11	Left lift platform in place	X2IN 11

28	SD0-			62	IN 12	The left lift is in place	X2IN 12
29	ORG0			63	IN 13	The right lift is in place	X2IN 13
30	IN 1			64	IN 14	The right lift is in place	X2IN 14
31	IN 2			65	IN 15	Receive the next delivery requirements	X2IN 15
32	IN 3			66	EXGND	GND	
33	IN 4			67	E24	24V VCC	
34	EXGND	GND		68	IN 16		

S3020A Radial Insertion Machine First board J1 interface wiring diagram

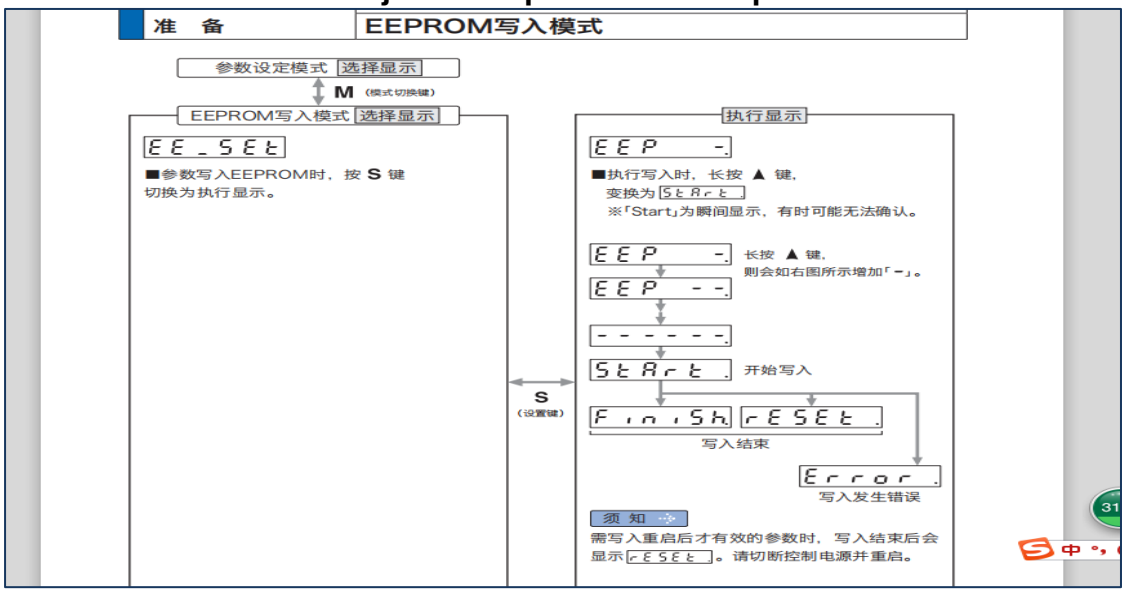
Lead No.	The original name	Signal Name	Wire Code	Lead No.	The original name	Signal Name	Wire Code
1	IN17	Material Station 1	J1IN1	20	GND		
2	IN18	Material Station 2	J1IN2	21	OUT13	Material Station 1	J1O1
3	IN19	Material Station 3	J1IN3	22	OUT14	Material Station 2	J1O2
4	IN20	Material Station 4	J1IN4	23	OUT15	Material Station 3	J1O3
5	IN21	Material Station 5	J1IN5	24	OUT16	Material Station 4	J1O4
6	IN22	Material Station 6	J1IN6	25	OUT17	Material Station 5	J1O5
7	IN23	Material Station 7	J1IN7	26	OUT18	Material Station 6	J1O6
8	IN24	Material Station 8	J1IN8	27	OUT19	Material Station 7	J1O7
9	IN25	Material Station 9	J1IN9	28	OUT20	Material Station 8	J1O8
10	IN26	Material Station 10	J1IN10	29	OUT21	Material Station 9	J1O9
11	IN27	Material Station 11	J1IN11	30	OUT22	Material Station 10	J1O10
12	IN28	Material Station 12	J1IN12	31	OUT23	Material Station 11	J1O11
13	IN29	Material Station 13	J1IN13	32	OUT24	Material Station 12	J1O12
14	IN30	Material Station 14	J1IN14	33	OUT25	Material Station 13	J1O13
15	IN31	Material Station 15	J1IN15	34	OUT26	Material Station 14	J1O14
16	IN32			35	OUT27	Material Station 15	J1O15
17	3.3V			36			
18	3.3V			37	GND		
19	GND			38			

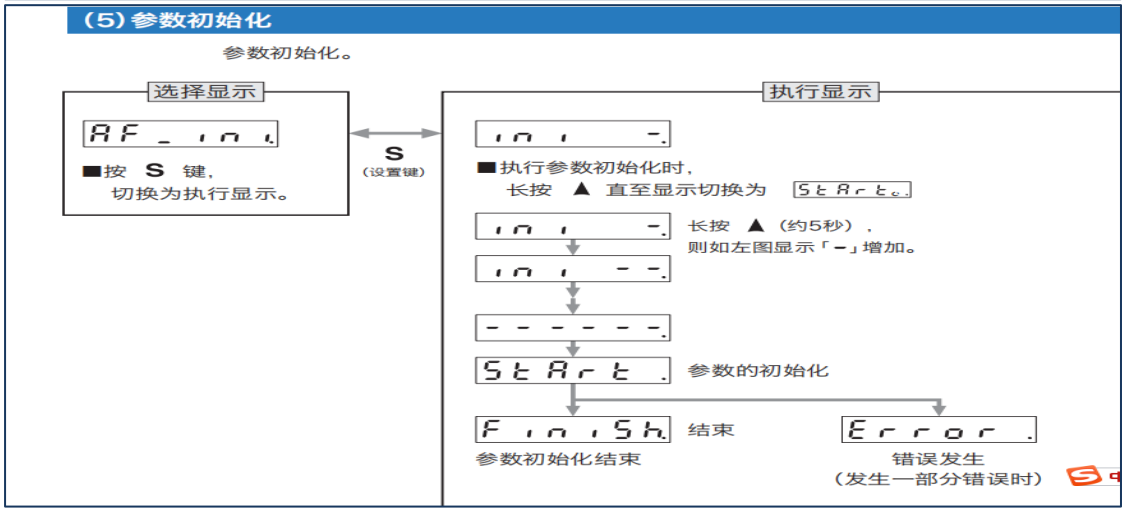
S3020A Radial Insertion Machine Second board J1 interface wiring diagram

Lead No.	The original name	Signal Name	Wire Code	Lead No.	The original name	Signal Name	Wire Code
1	IN17	Material Station 16	J2IN1	20	GND		
2	IN18	Material Station 17	J2IN2	21	OUT13	Material	J2O1
3	IN19	Material Station 18	J2IN3	22	OUT14	Material	J2O2
4	IN20	Material Station 19	J2IN4	23	OUT15	Material	J2O3
5	IN21	Material Station 20	J2IN5	24	OUT16	Material	J2O4
6	IN22			25	OUT17	Material	J2O5
7	IN23			26	OUT18		
8	IN24			27	OUT19		
9	IN25			28	OUT20		

10	IN26			29	OUT21		
11	IN27			30	OUT22		
12	IN28			31	OUT23	Paper cutting	J2O11
13	IN29	dispensing head left	J2IN13	32	OUT24	Material shoveling	J2O12
14	IN30	dispensing head right	J2IN14	33	OUT25		
15	IN31			34	OUT26		
16	IN32	paper cutting	J2IN16	35	OUT27		
17	3.3V			36			
18	3.3V			37	GND		
19	GND			38			

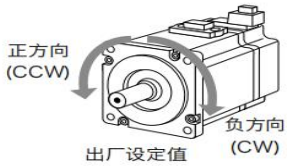
Servo motor and adjustment parameters steps Panasonic A6





Pr0.00* 旋转方向设定	设定范围	单位	标准出厂设定	相关模式
	0～1	—	1	P S T F

设定指令的方向和电机旋转方向的关系。
0：正方向指令时，电机旋转方向为CW方向(从轴侧看电机为顺时针方向)
1：正方向指令时，电机旋转方向为CCW方向(从轴侧看电机为逆时针方向)



Pr0.03 实时自动调整机械刚性设定	设定范围	单位	标准出厂设定	相关模式
	0～31	—	A、B、C型:13 D～H型:11	P S T F

设定实时自动调整有效时的响应性。

低 ←机械刚性→ 高
低 ←伺服增益→ 高
0・1----11-13----------30・31
低 ←响应性→ 高

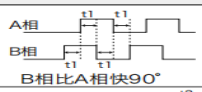
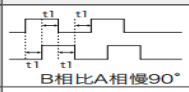
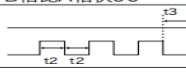
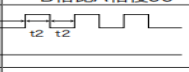
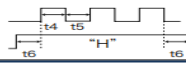
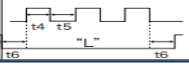
注 意
・设定值变高，则速度响应性变高，伺服刚性也提高，但变得容易产生振动。请在确认动作的同时，将设定值由低到高进行变更。
・因为控制增益是在停止时进行更新，所以增益极低或连续输入同一方向指令等时，如果电机不停止，变更Pr0.03「实时自动调整机械刚性设定」会出现设定值无法生效的情况。此时，当电机停止后可能会由于刚性设定的生效，导致出现异音或震动产生。请在刚性变化时，暂时让电机停止，确定刚性设定已经确实生效后，再进行下一动作。

标准出厂设定：【 】

Pr0.06*	指令脉冲旋转方向设定	设定范围	单位	标准出厂设定	相关模式
		0~1	—	0	P F

Pr0.07*	指令脉冲输入模式设定	设定范围	单位	标准出厂设定	相关模式
		0~3	—	1	P F

■指令脉冲的输入形态

Pr0.06 (指令脉冲旋转方向设定) 设定值	Pr0.07 (指令脉冲输入模式设定) 设定值	指令脉冲形态	信号名称	正方向指令	负方向指令
【0】	0 或 2	90°位相差 2相脉冲 (A相＋B相)	PULS SIGN	 B相比A相快90°	 B相比A相慢90°
	【1】	正方向脉冲列 ＋ 负方向脉冲列	PULS SIGN		
	3	脉冲列 ＋ 符号	PULS SIGN		

参数	出厂	实际
PR0.00	1	按实际需要
PR0.03	13	按实际需要
PR0.06	0	0
PR0.07	1	3

Training videos

https://www.youtube.com/watch?v=Dz0_WwAoDlE
https://www.youtube.com/watch?v=FCx9sJRpsYc
https://www.youtube.com/watch?v=N0Kz04Y7NRw
https://www.youtube.com/watch?v=2T1fappuaOU