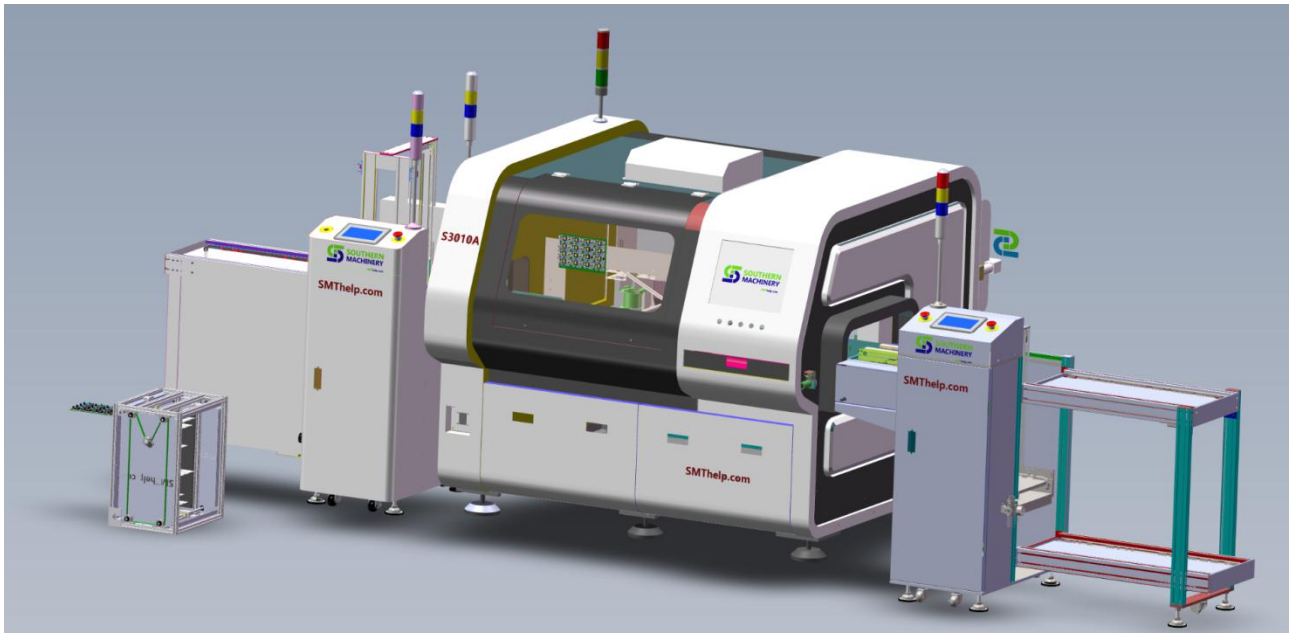
Southern Machinery S3010A Radial Auto Insertion machine manual



machine overview:

S3000 series machines are 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 Chinese 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) Make 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 is divided into the following three areas.

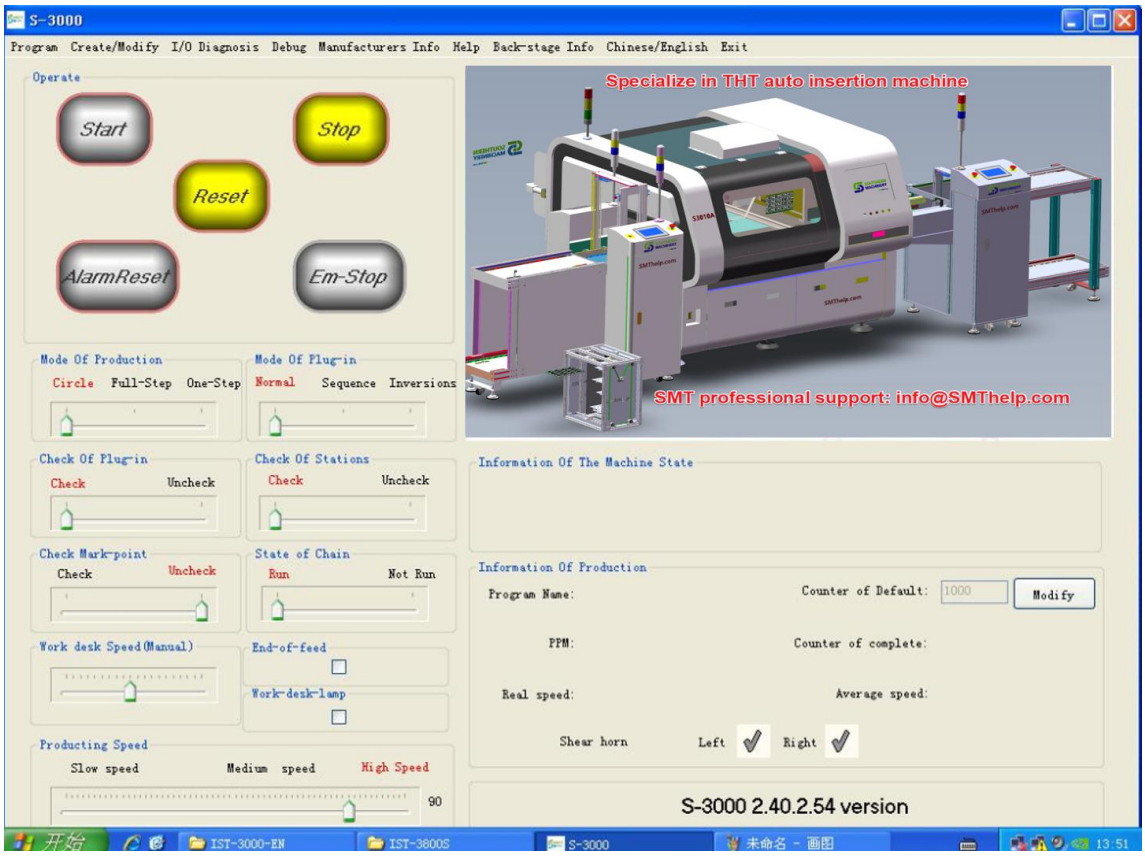


Figure 1

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: During 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 theAuto Insertion process.

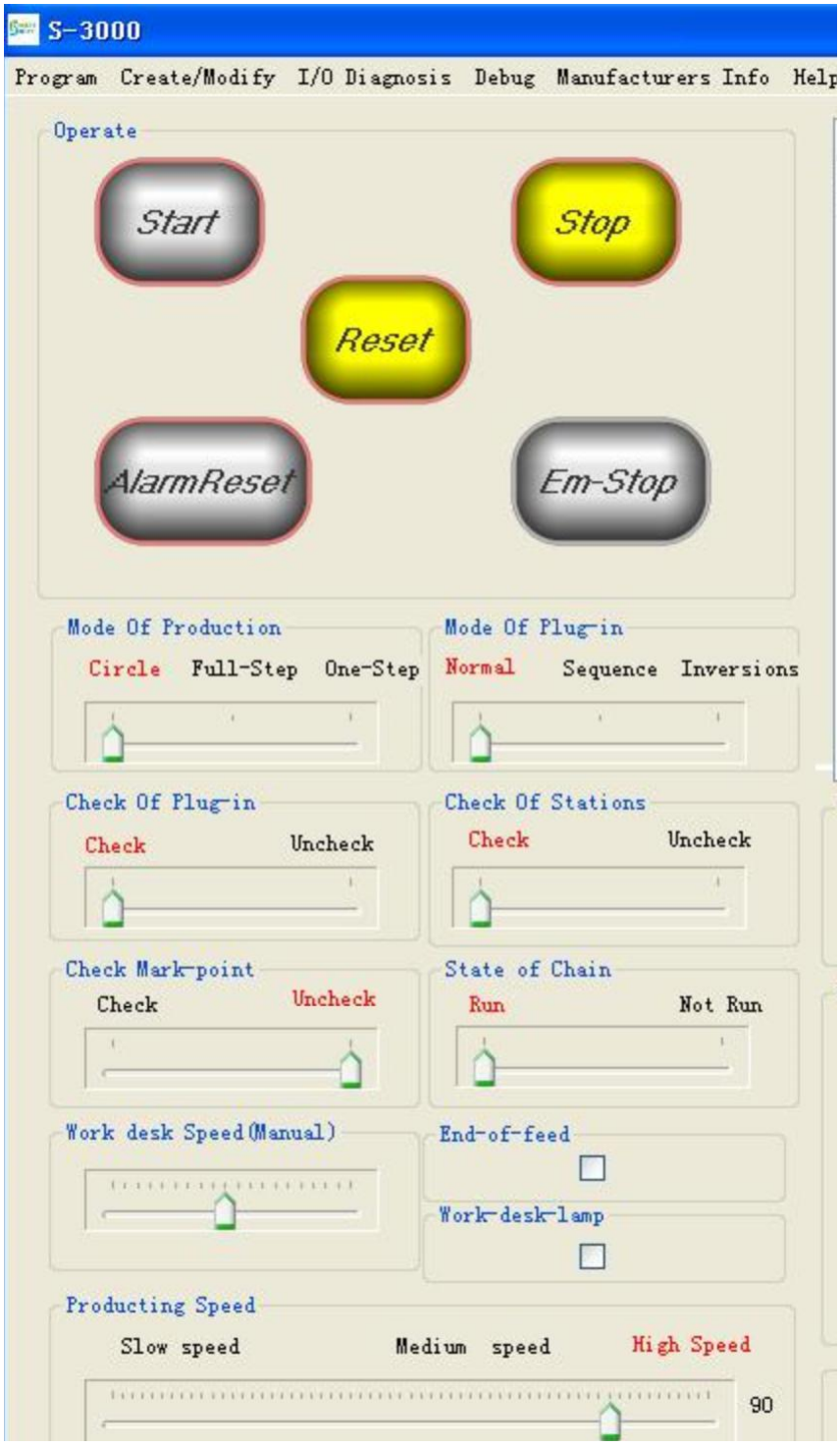


Figure 2

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 thearea Display current production information.

TheFigure 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 namename of the program

shows thethat is about to or has been running. A it would be "open" a different

procedurevaries.

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.

<u>Modify the number of setsnumber</u>

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

3. Toolbar description

Figure 4

1) File program

<u>import program</u>

Figure 5

♀↓→’← ♃→↓∪ ′˘⌒∩˘∗∂ → Ψ∂′⌒˘§ ′˘⌒∩˘∗∂, →§ ∃→↓↓ ′⌒′ †′§∈∗§ ’∗∇ ⊂→ℵ′↓∗® ∗↓↓ ⊃→↓∪ ∇∗∂∪ℵ 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.

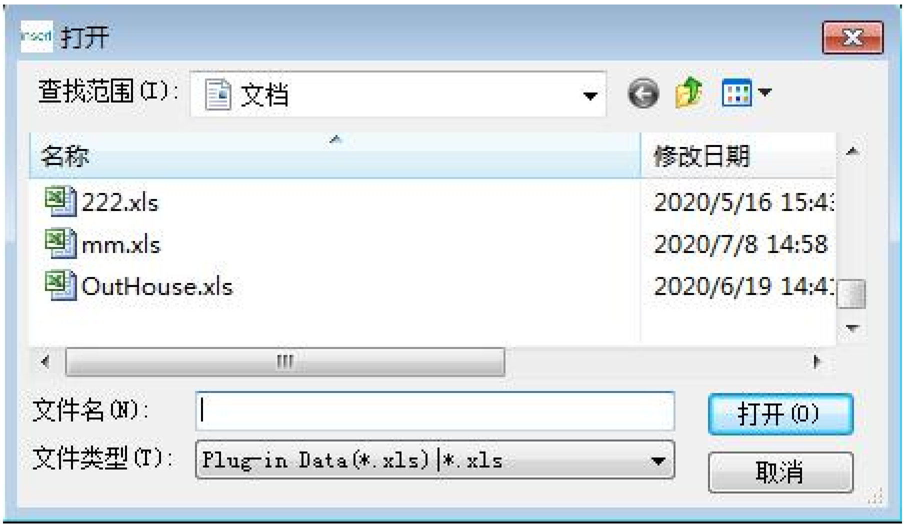


Figure 6

<u>Export Program</u>

♀↓→’← ♃→↓∪ ϒ˘⌒∩˘∗∂→Ψ∂′⌒˘§ ϒ˘⌒∩˘∗∂, →§ ∃→↓↓ ′⌒′ †′ ∗ ⊂→∗↓⌒∩ ‘⌒ℒ ⊃⌒˘ ℵ∪↓∪’§→∇∩ §∈∪ ⊃→↓∪ ∇∗∂∪, (∗ℵ ℵ∈⌒∃∇ →∇ §∈∪ ⊃→∩†˘∪ ‘∪↓⌒∃), ®⌒† ’∗∇ ∗↓ℵ⌒ ∪∇§∪˘ §∈∪ ⊃→↓∪ ∇∗∂∪ ®⌒† ∇∪∪⊂ →∇ §∈∪ ⊃→↓∪ ∇∗∂∪ ⊃→∪↓⊂, ∗∇⊂ ’↓→’← ”𝔖∗‡∪”

Ω∈⋇§’א →§.

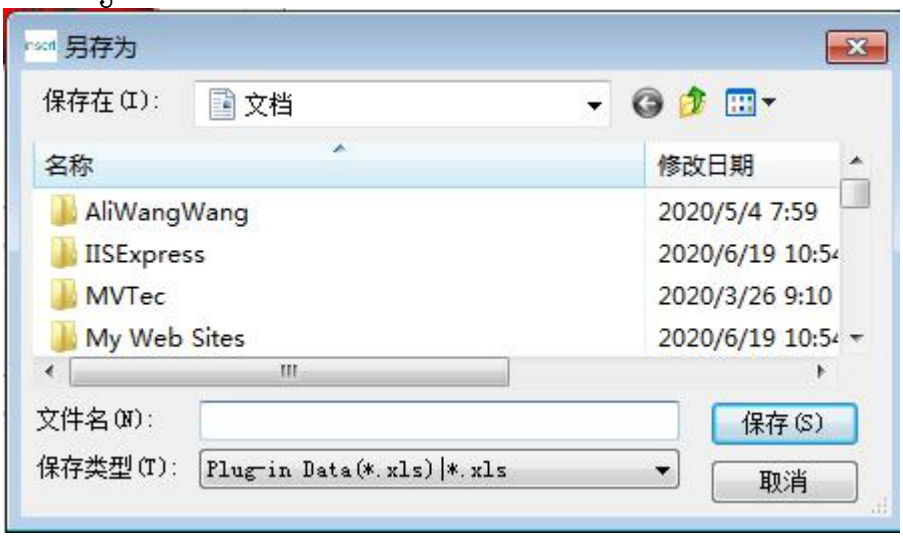


Figure 7

Modify program file

♀↓→’← 2ϟ→↓∪ ϒ˘⌢∩˘⋇∂ → ⁎⌢⊂→⊃® ϒ˘⌢∩˘⋇∂ 2ϟ→↓∪, →§ ∃→↓↓ ′⌢′ †′ ⋇ ⊂→⋇↓⌢∩ ‘⌢ℒ ⊃⌢˘ א∪↓∪’§→∇∩ §∈∪ ⊃→↓∪ ∇⋇∂∪ (2ϟ→∩†˘∪ 6). Ω∈∪∇ ’↓→’← §∈∪ ∇⋇∂∪ ⌢⊃ §∈∪ ′˘⌢∩˘⋇∂ ®⌢† ∇∪∪⊂ §⌢ ”⌢′∪∇” →∇ →§, ⋇∇⊂ §∈∪∇ ’↓→’← ”ʊ′∪∇”, →§ ∃→↓↓ ⌢′∪∇ →∇ §∈∪ ⌢⊃⊃→’∪ →∇ .ℒ↓א ⊃⌢˘∂⋇§.

2) Make and modify the program

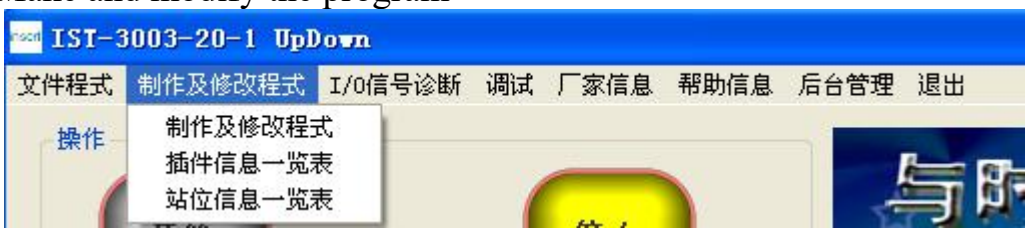
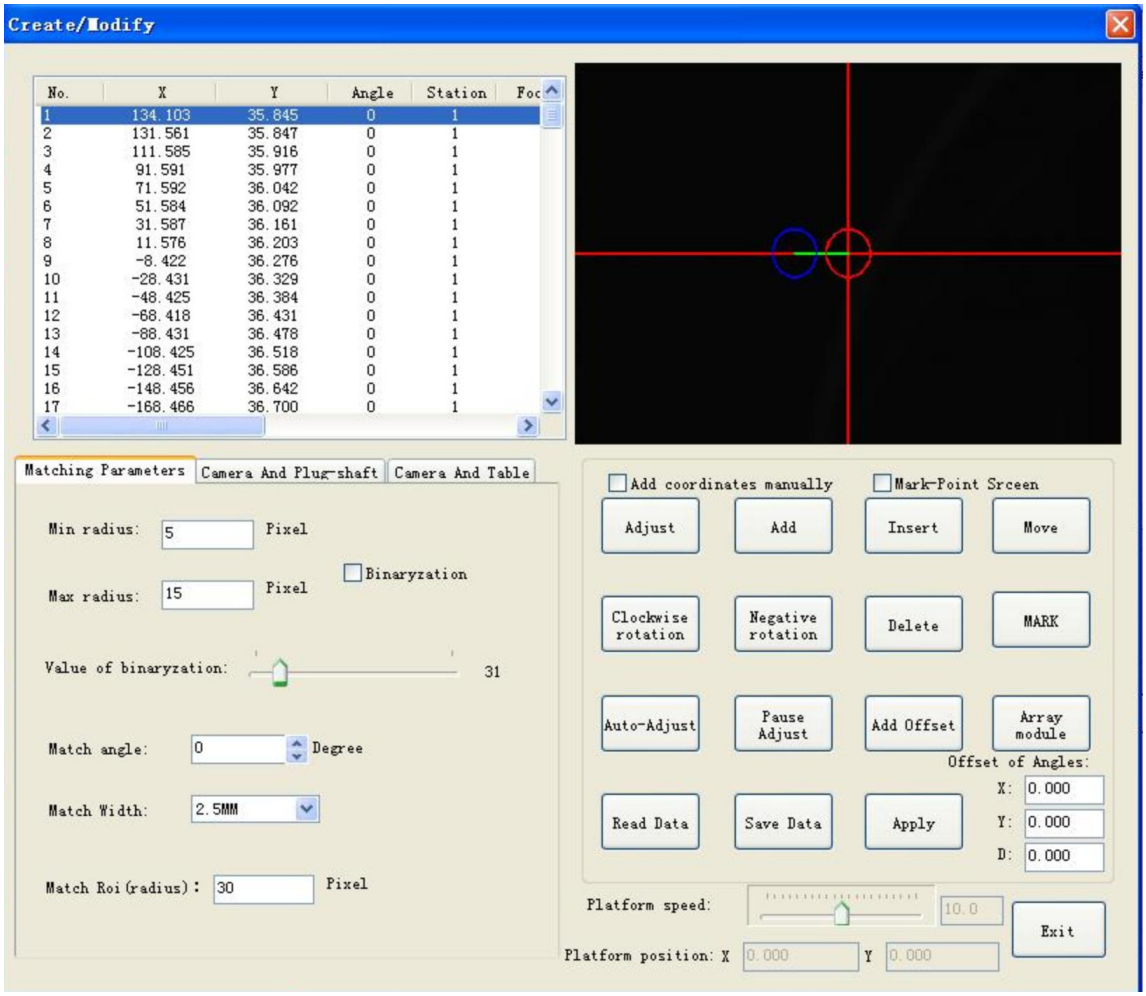


Figure 8

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

♀↓→’← ⁎⋇←∪ ⋇∇⊂ ∂⌢⊂→⊃® ′˘⌢∩˘⋇∂ → ⁎⋇←∪ ⋇∇⊂ ∂⌢⊂→⊃® §∈∪ ′˘⌢∩˘⋇∂, ⋇∇⊂ §∈∪ ⊃⌢↓↓⌢∃→∇∩ ⊂→⋇↓⌢∩ ‘⌢ℒ ∃→↓↓ ′⌢′ †′



. Figure 9

I Data display area: display the generated Auto Insertions Data

序号	X轴	Y轴	角度	站位	脚位	元件名称	元
1	0.000	10.000	60	1	r1	aa	极
2	11.111	10.000	0	2	r2	bb	无极
3	22.222	10.000	0	3	r3	cc	E
4	33.333	10.000	0	11	r4	dd	保
5	44.444	10.000	0	5	r5	ee	三
6	55.556	10.000	0	6	r6	ff	L
7	66.667	10.000	0	7	r7	gg	L
8	77.778	10.000	0	8	r8	hh	三
9	88.889	10.000	0	9	r9	ii	E
10	100.000	10.000	0	10	r10	mm	E
11	-45.000	96.500	0	1			

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.

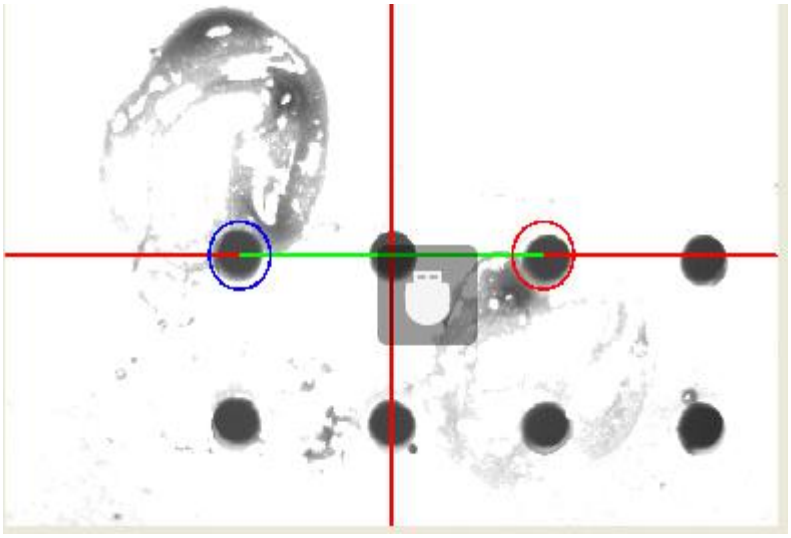


Figure 11

III Matching parameter setting areain

There are three pagesthis 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 isangle

based on thebetween 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

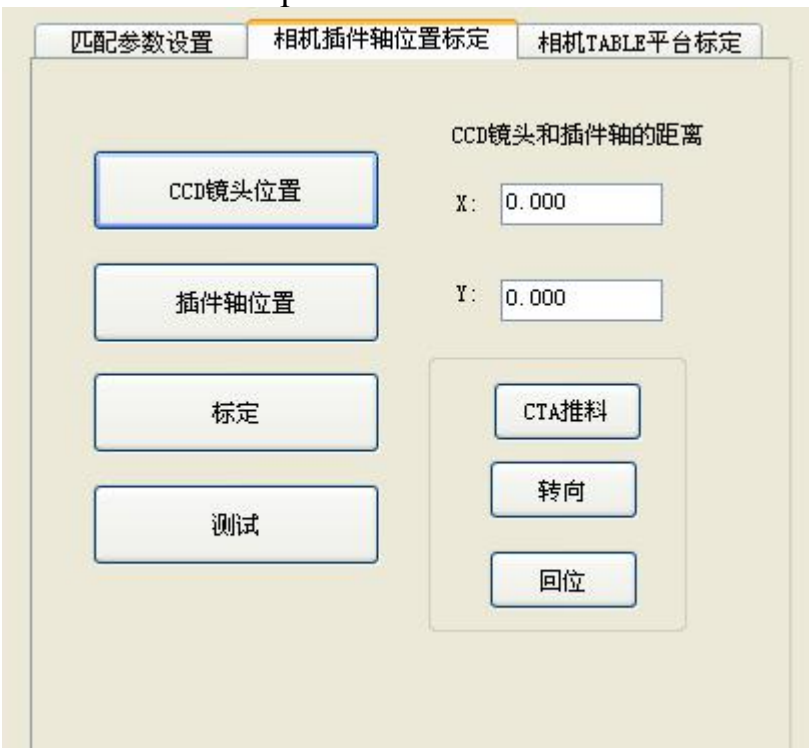


Figure 13

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,

thecamera positionand theaxis 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

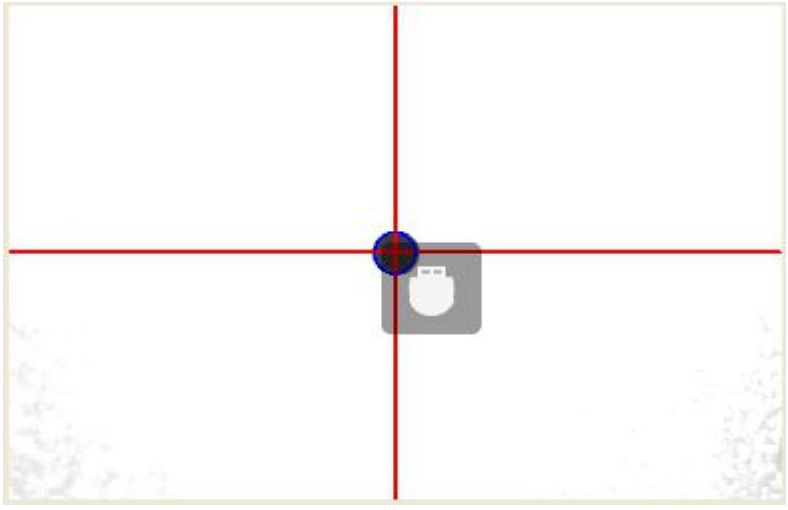


Figure 15 The

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:

Manuallycoordinates of

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

correction when

theReplace 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 listthe last

Insertmissing piece ofintoinsert

the current imagethe ROI area of the current image tothe 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

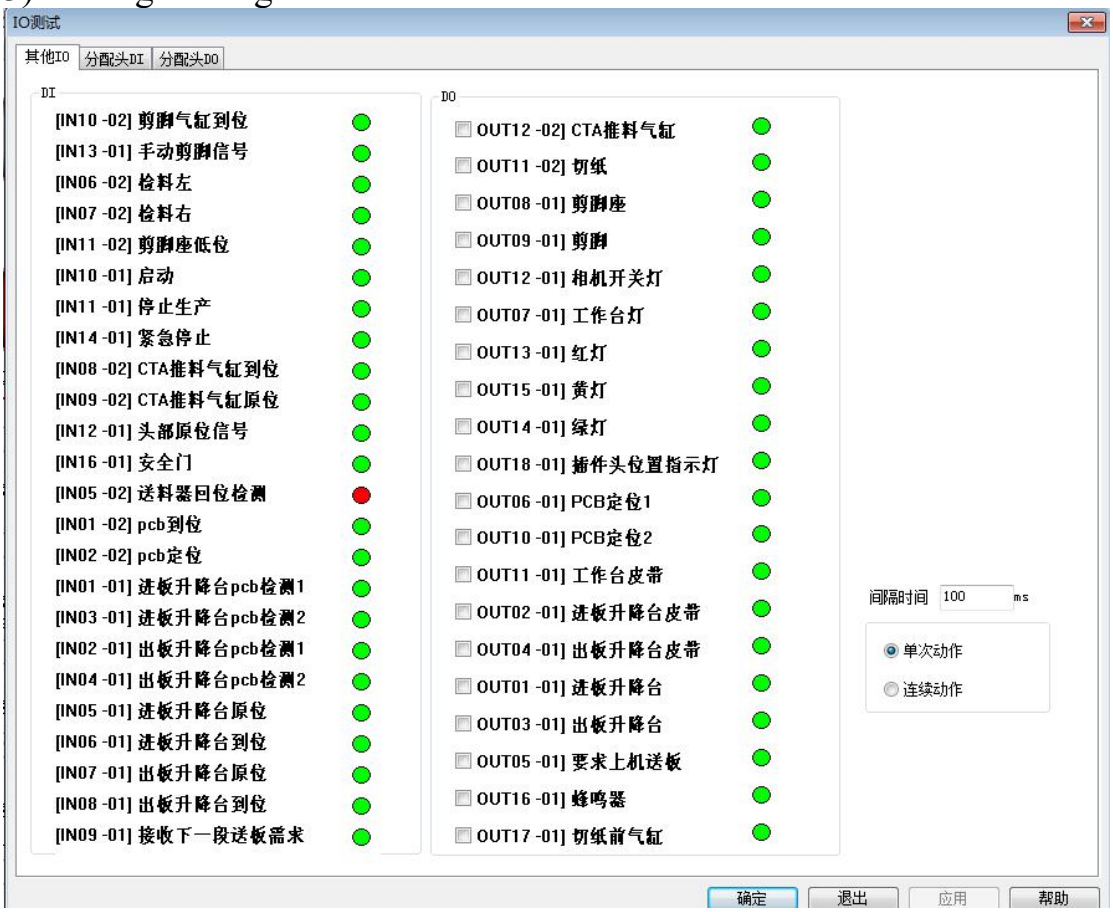
match a certain position in the first module and the same position in the last module, and then enter the number of modules in the X direction and the modules in the Y direction Count, you can generate Auto Insertion data that combines several modules.

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

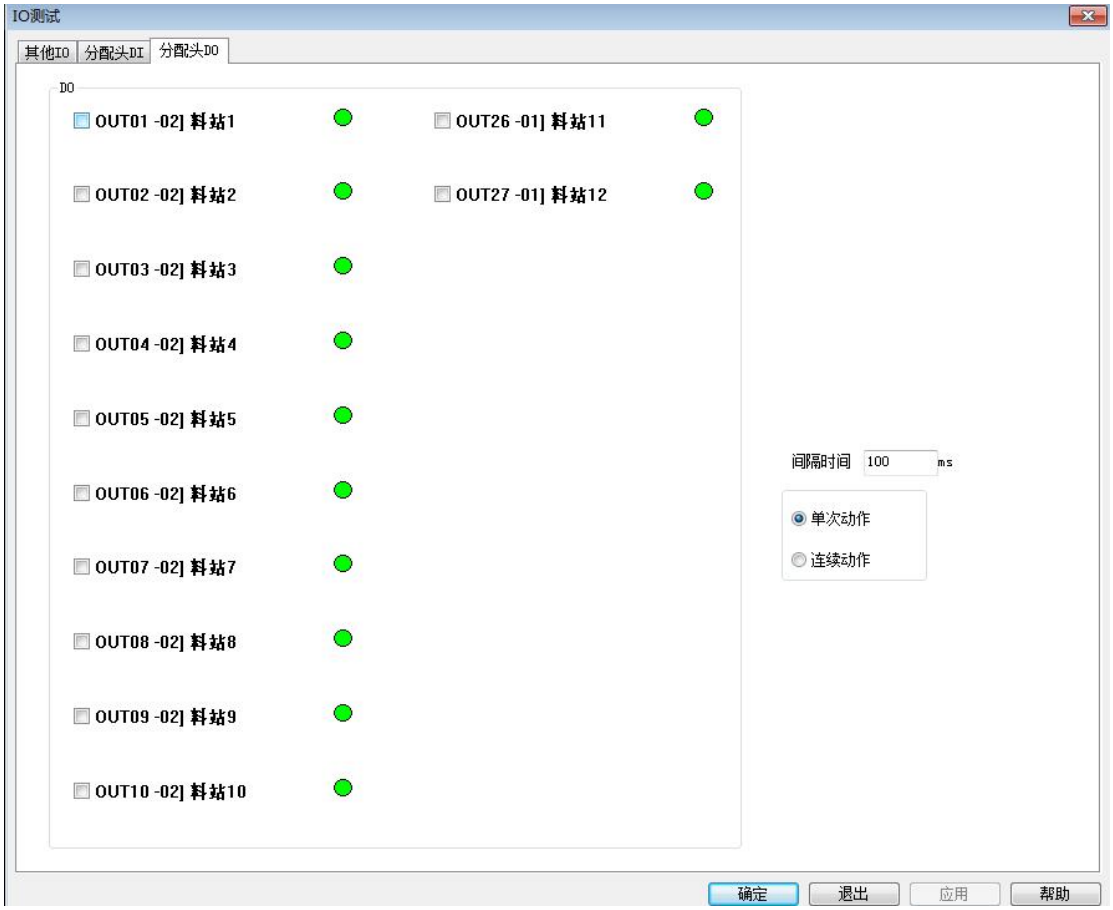
equipment will give a reminder that the material at a station is about to run out, please pay attention to loading. You can also set the operating speed of the P-axis separately, so that the P-axis speed can be separated when the high and low materials are hit, so as to facilitate better Auto Insertion. 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
Checkleft 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.

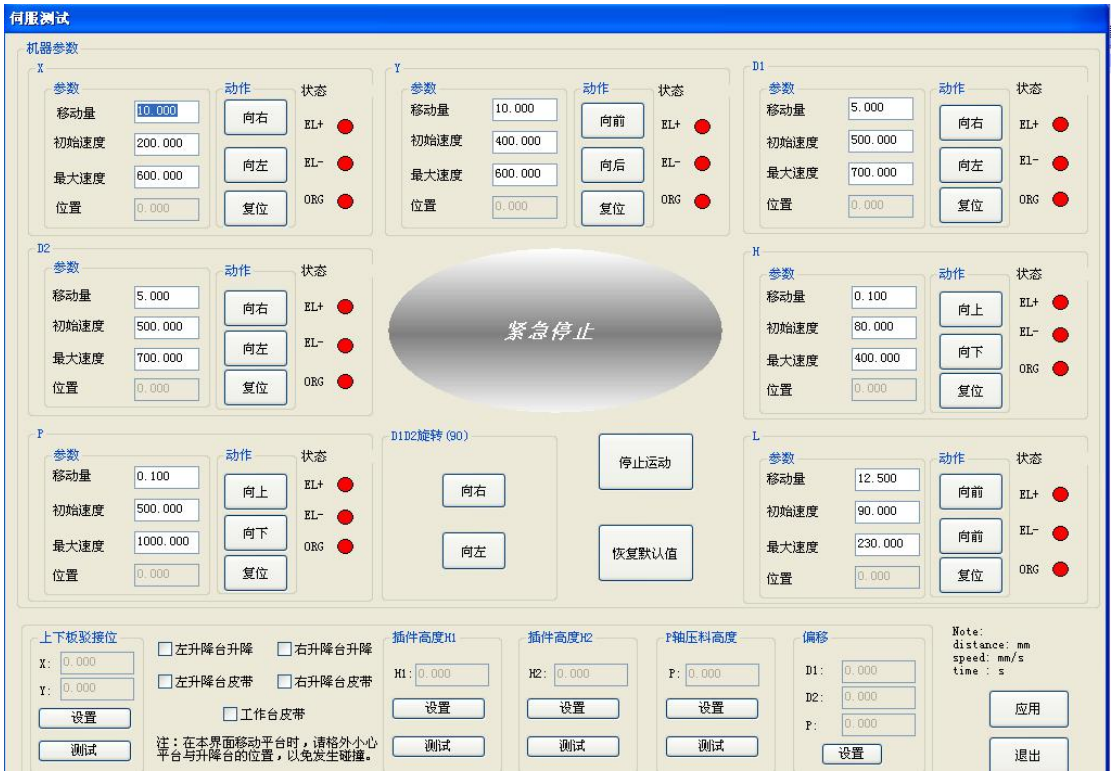
Chain detection detects the presence or absence of material on the chain.
The low position of the cutting foot detects whether the cutting foot is in the low position.
Turntable in position When the magnet on the turntable approaches the "in-position" magnetic sensor of the turntable detection board, 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 thesupplementary 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 Driveshears 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 forsetting.

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.

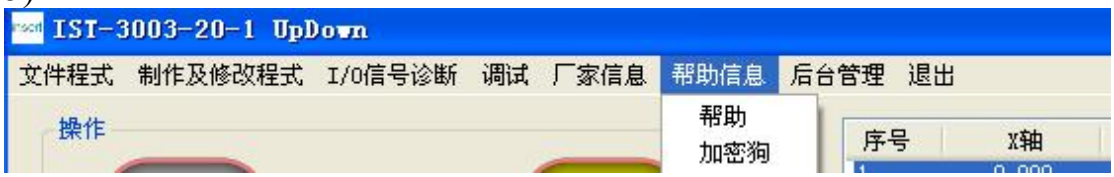
Auto Insertion axis height 1: The Auto Insertion axis with components is inserted down, and the position value of the component pin on the surface of the PCB is a bit higher than the position of the Auto Insertion axis height 2. It is convenient to check whether the Auto Insertion holes and pins are aligned.

Auto Insertion shaft height 2: The position where the Auto Insertion shaft

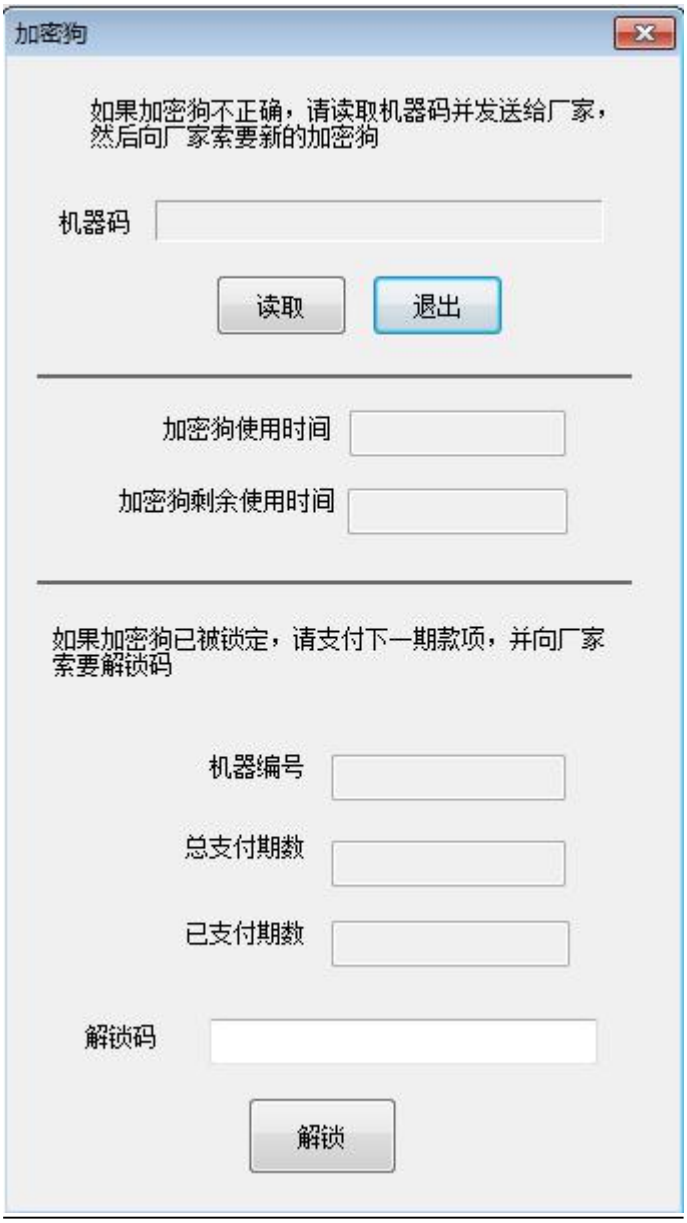
is completely inserted into the PCB surface.
The motor running speed is restored to the factory value: the speed of each axis is restored to the factory guide value when leaving the factory.
Compensation value setting:

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.

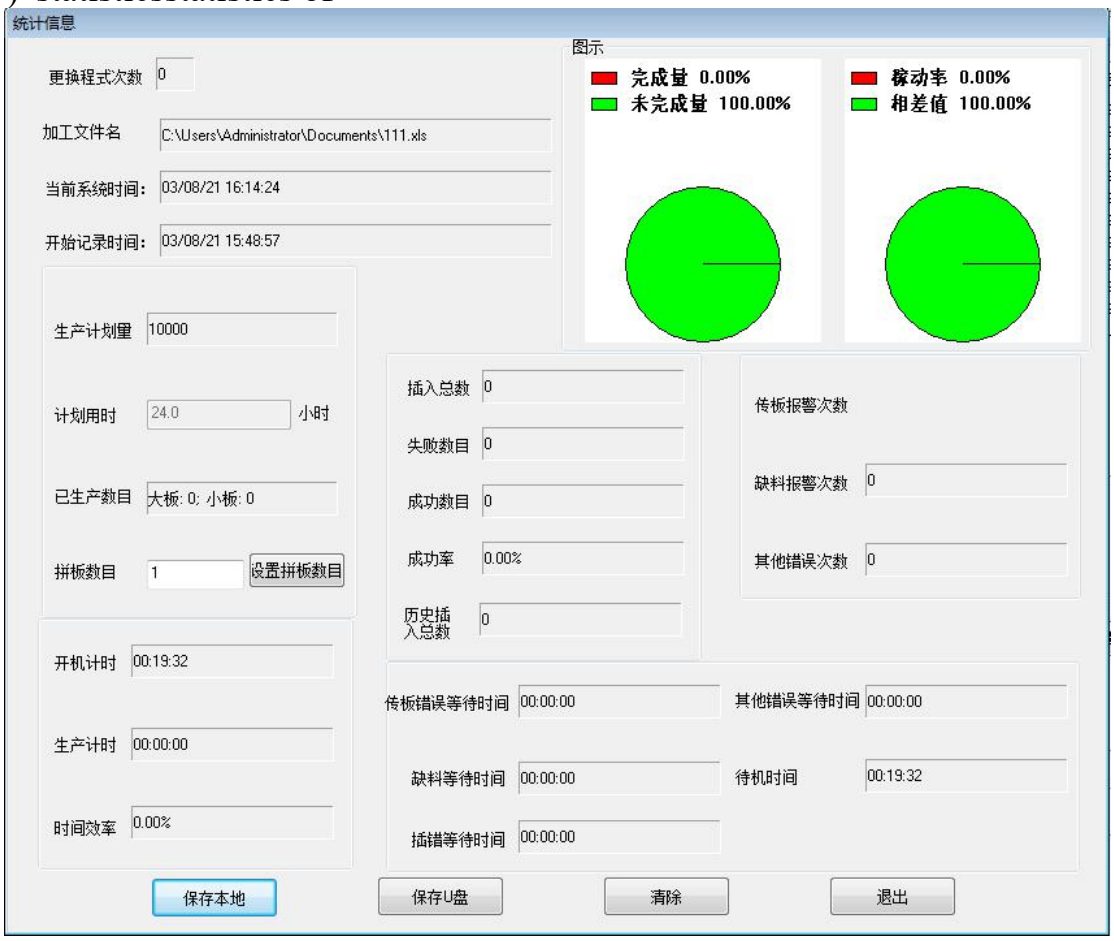


If the dongle of the current machine is incorrect, please read the machine code and send this machine code to the manufacturer, and then ask the manufacturer for a new dongle.

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) statisticsstatistics of



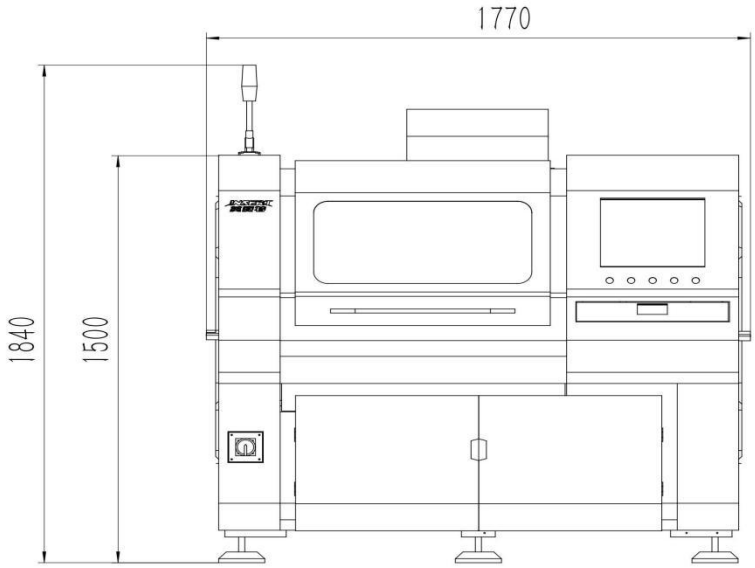
show that theproduction data and efficiency have been

8) exited.

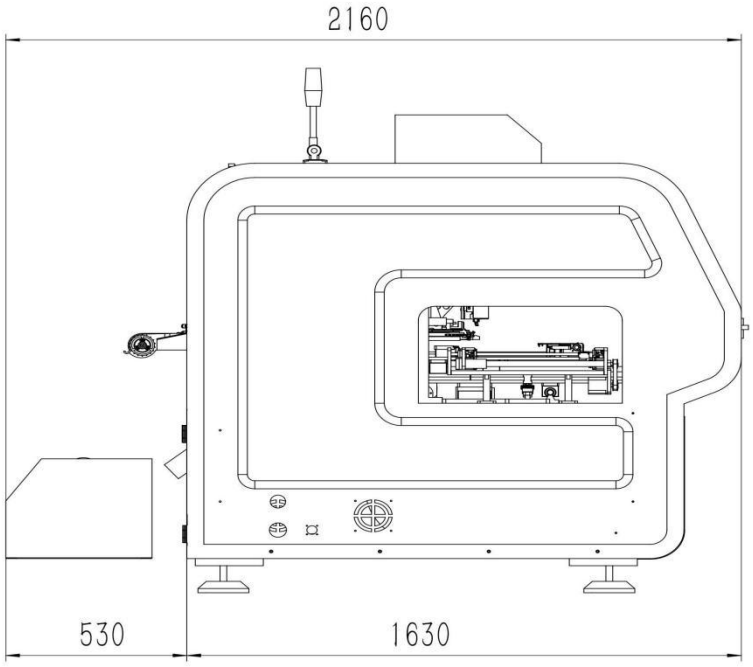
Click exit to exit the program.

Insertion machine mechanism description

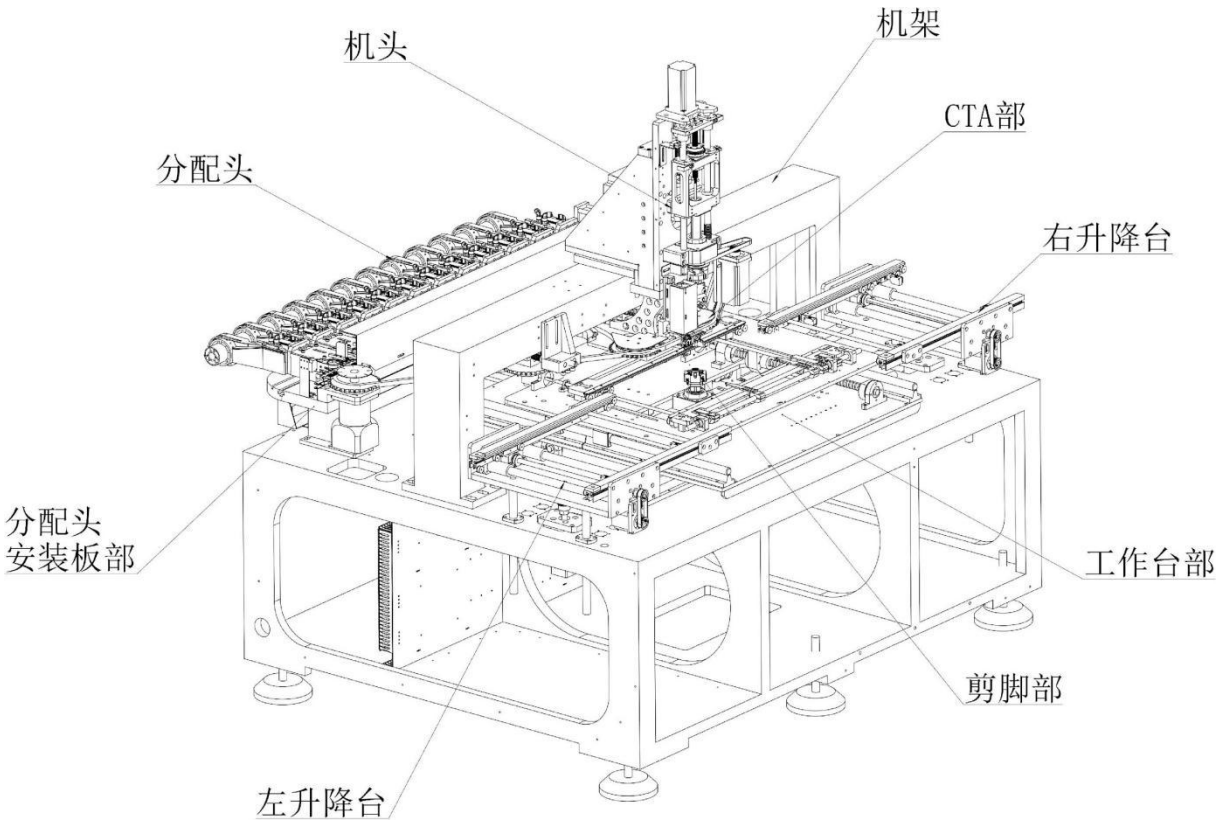
● 3K vertical machine front view



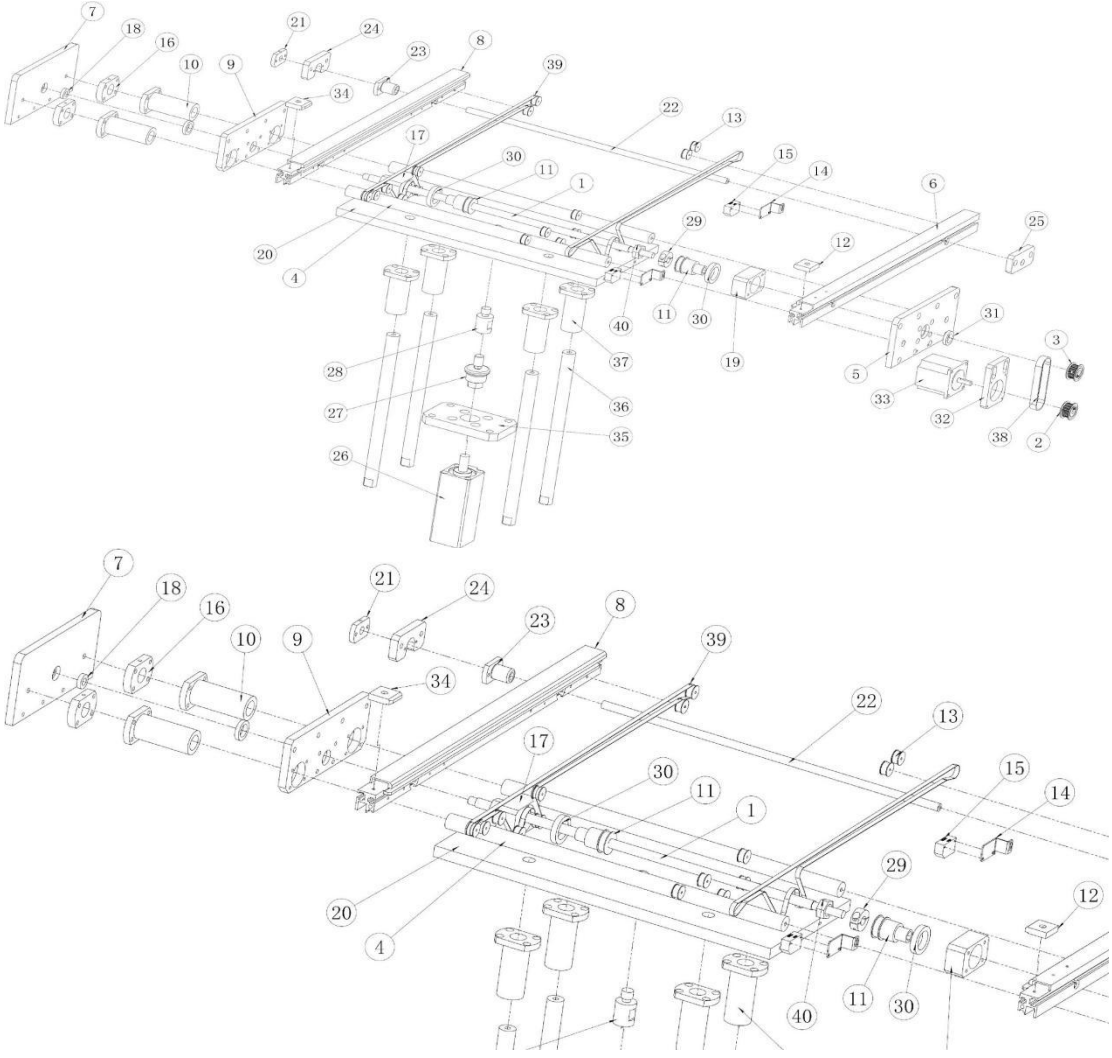
vertical machine side view

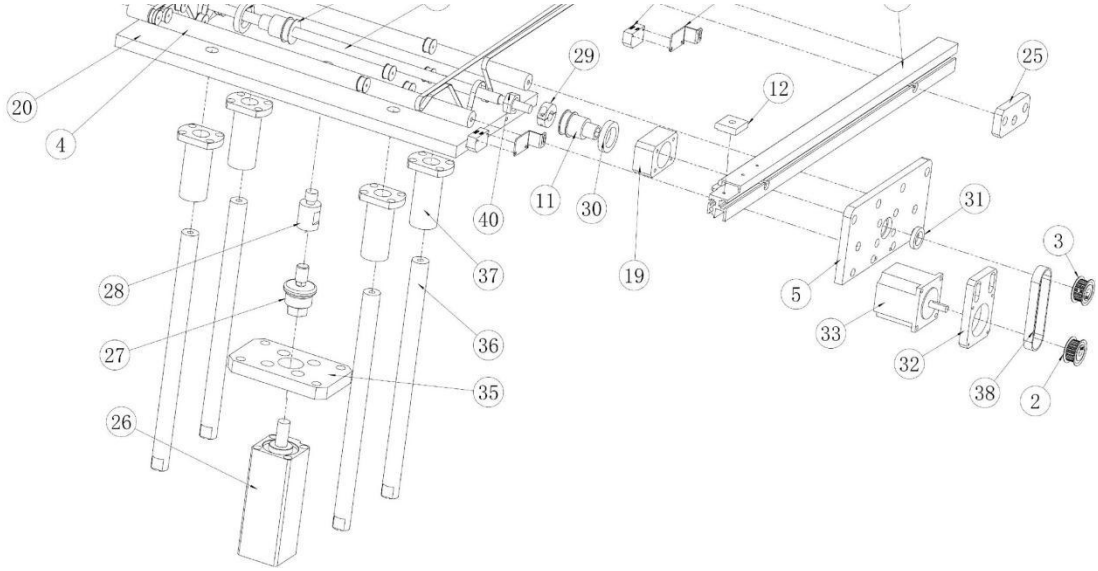


12 standing Auto Insertion machine assembly



1、 left lift table assembly



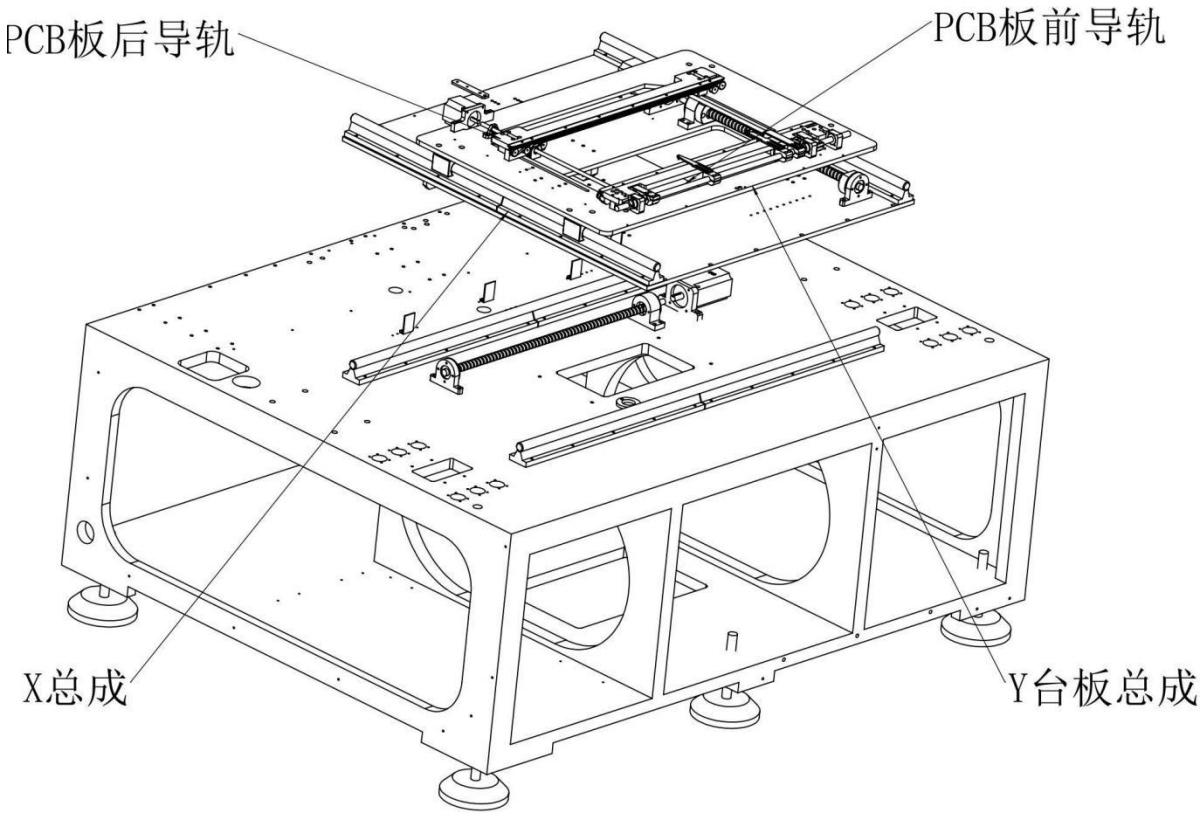


left lift table assembly material list

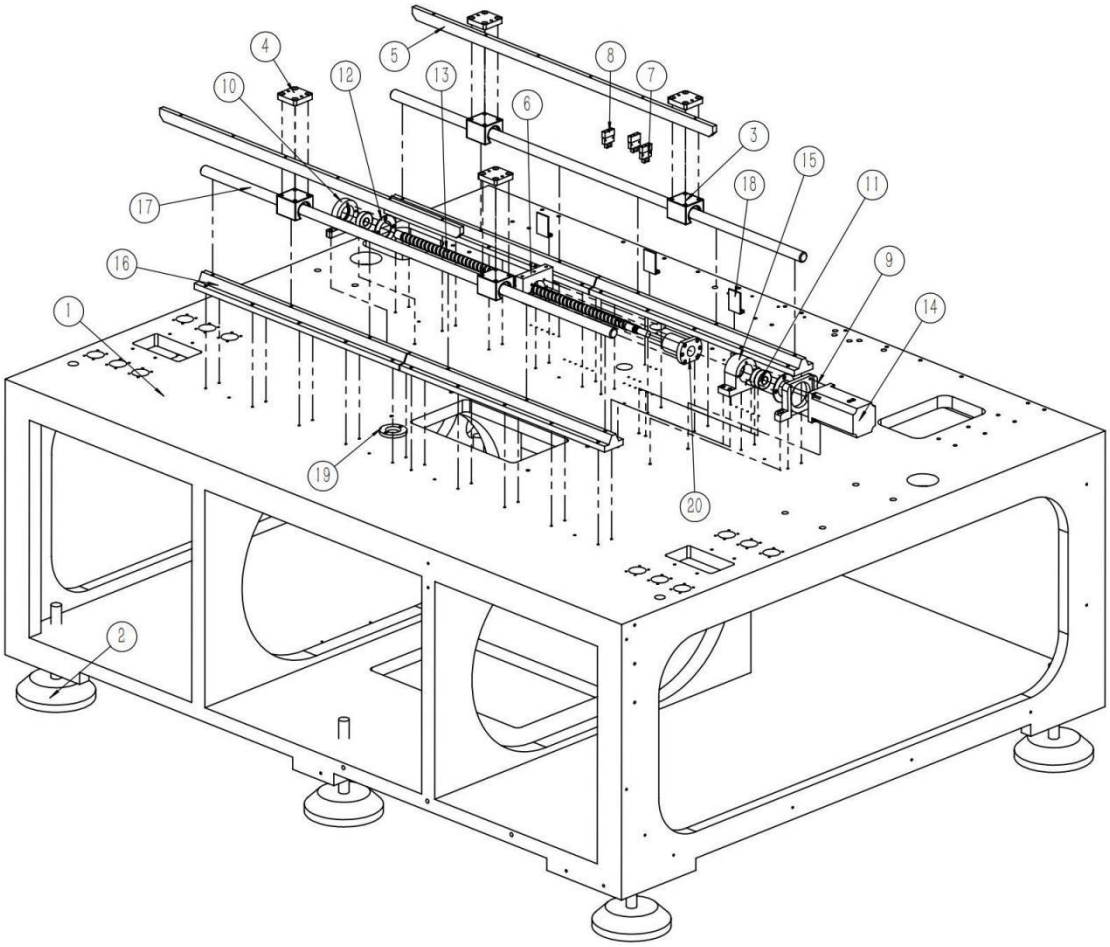
item number	part number	description	quantity	note
1	drive shaft.	3K-12-SJTZB-01	1	
2	IST right synchro wheel-01.	3K-12-SJTZB-02	1	
3	Synchronous wheels.	3K-12-SJTZB-03	1	
4	20optical axis.	3K-12-SJTZB-04	2	
5	left front fixing plate change floweraluminum.	3K-12-SJTZB-05		
6	Left front aluminum.	modification3K-12-SJTZB-06	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 regulatingplate.	3K-12-SJTZB-09		
10	flangeLM20UU.	3K-12-SJTZB-10	2	
11	Rear rotating wheelA.	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 blockB.	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	diameter10optical 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 plateB.	3K-12-SJTZB-25	1	
26	cylinderSDAS40-75-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,Xassembly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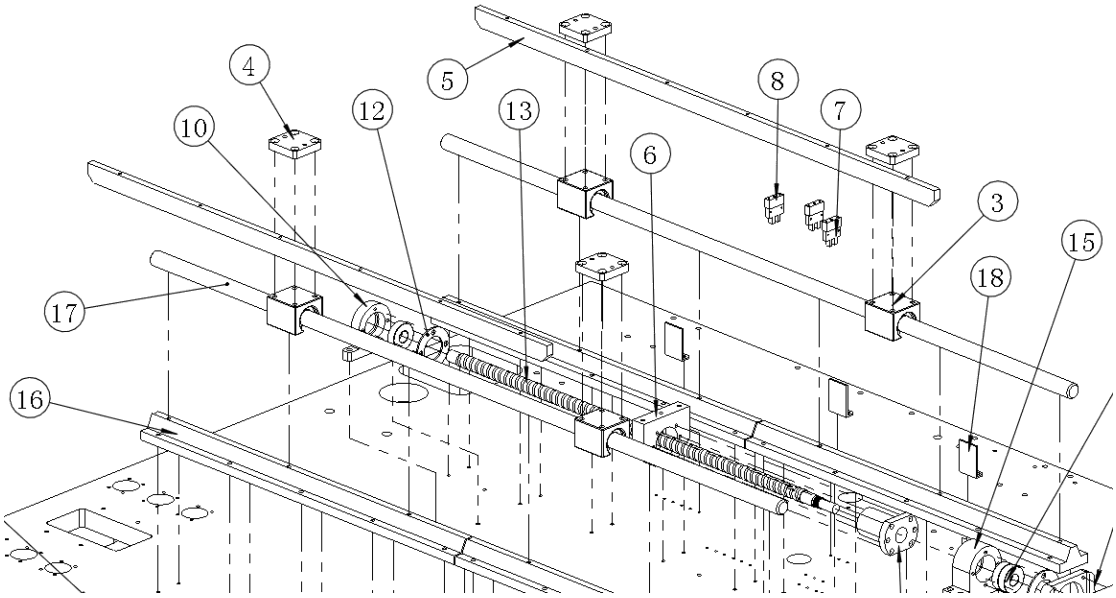
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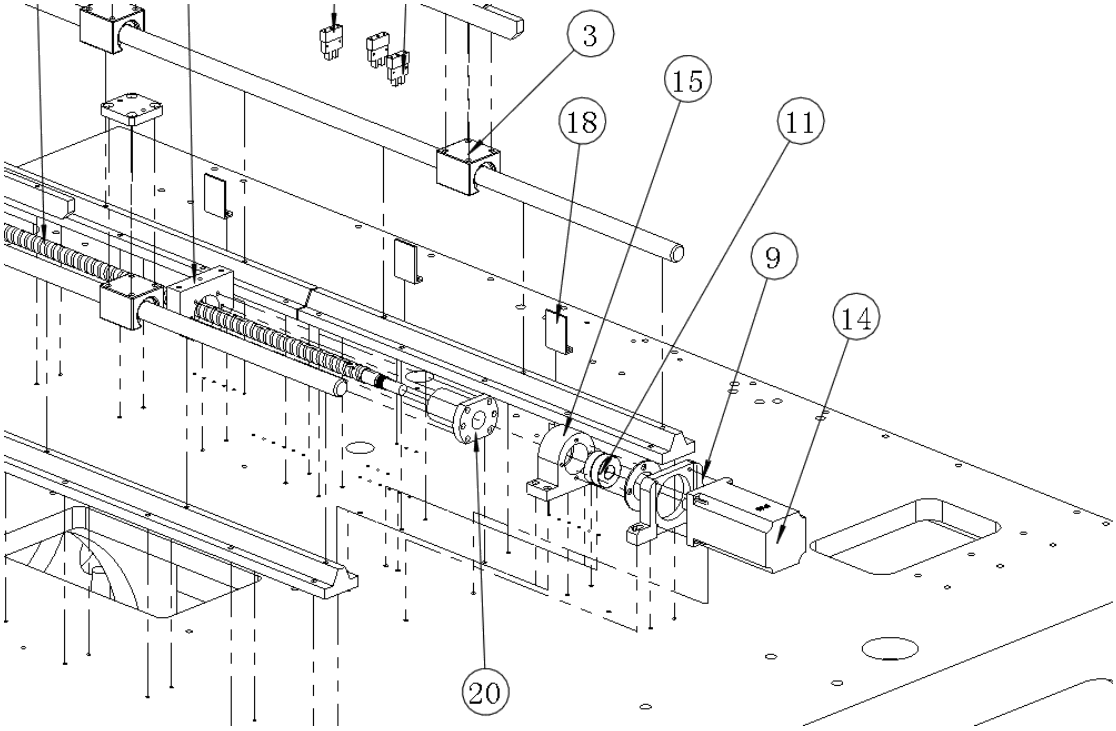
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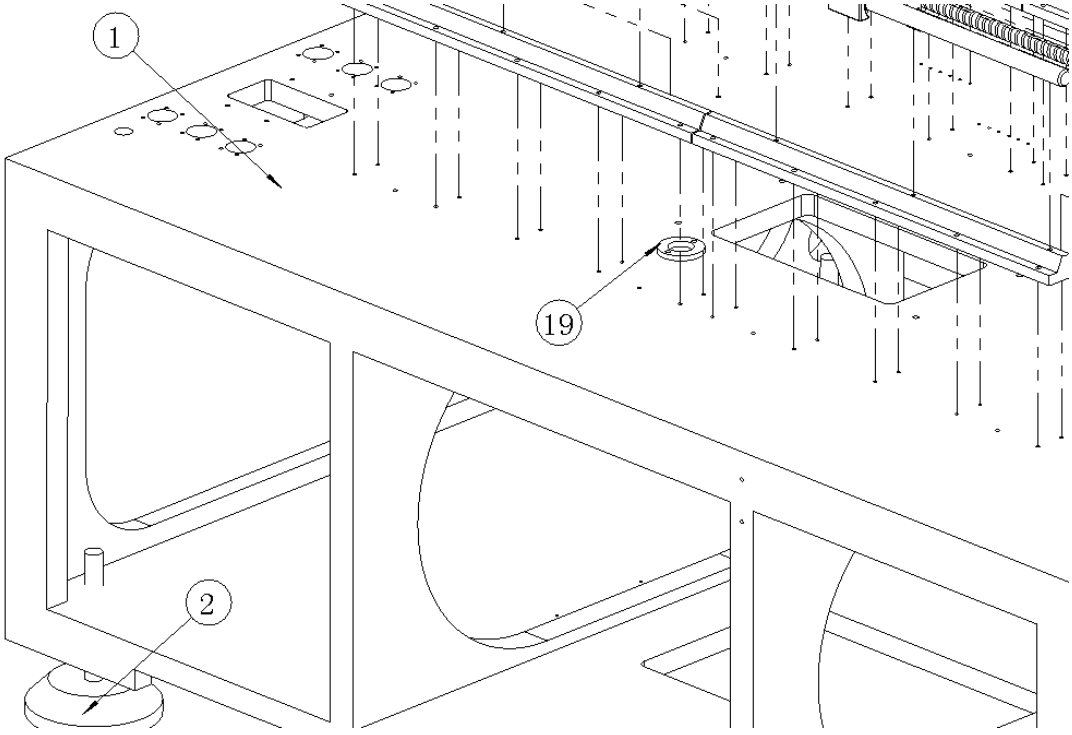
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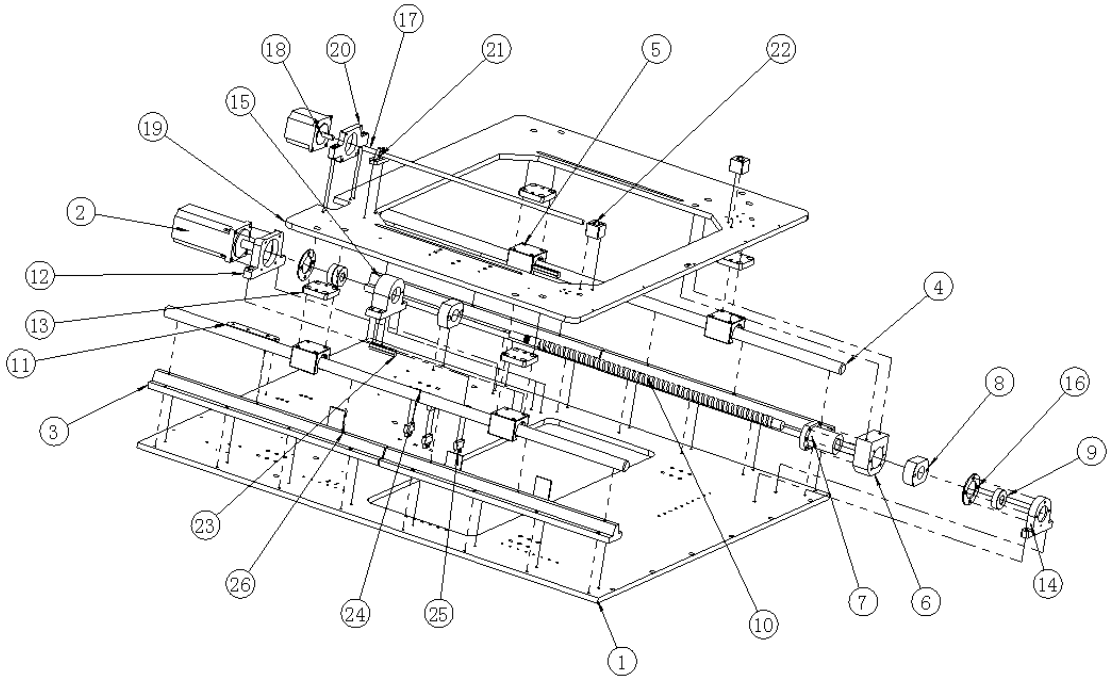
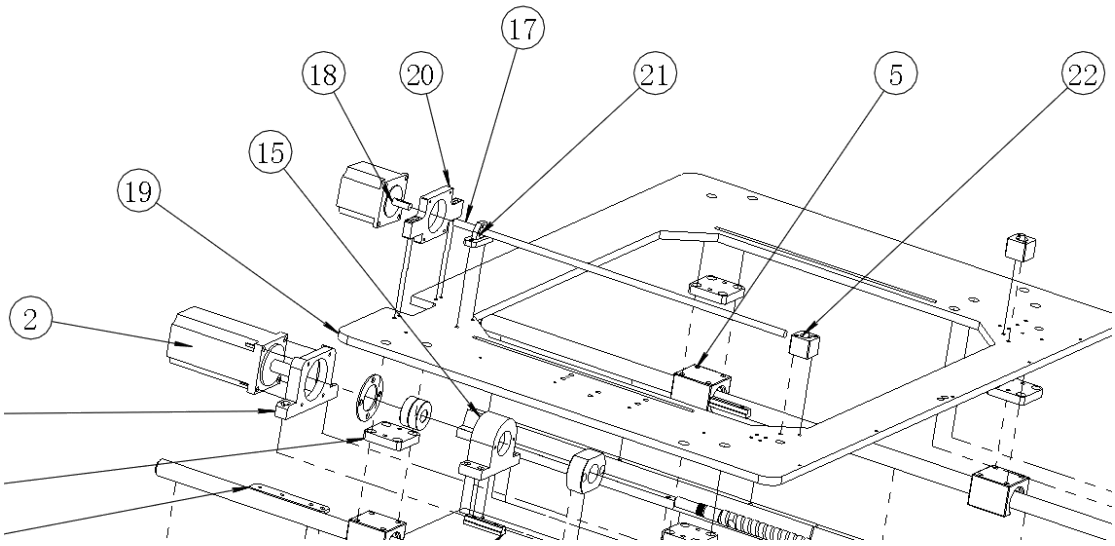
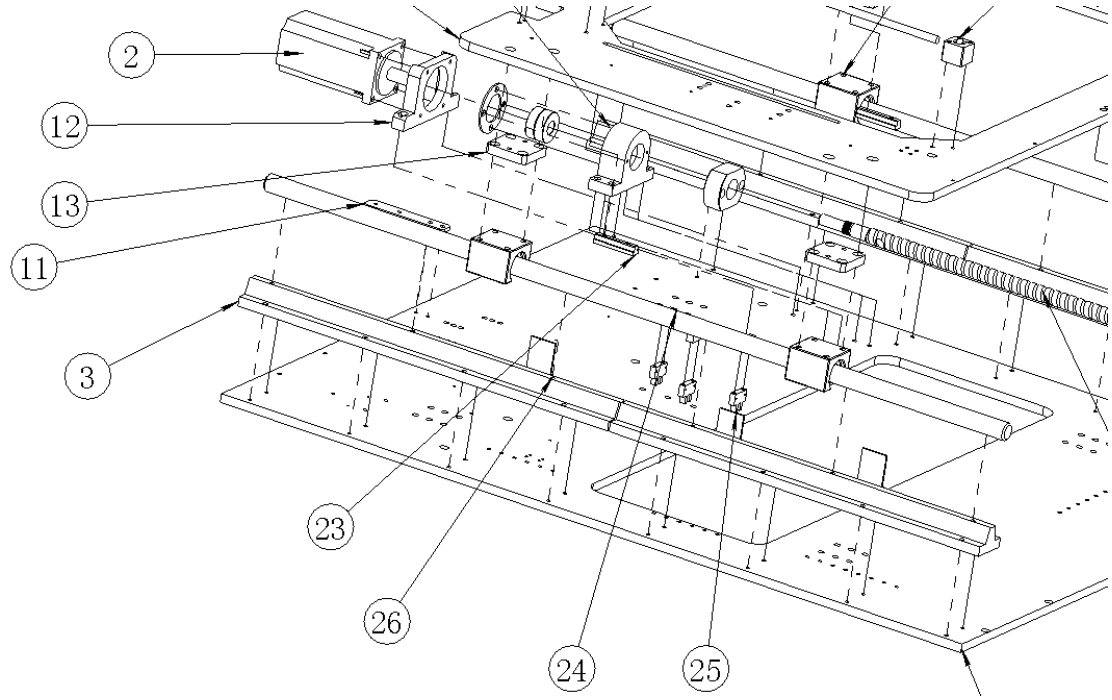
X cartridgeBOM

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	Yplaten reinforcement plate	3K-12-GZT- XTB-05	2	
6	XScrew 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	Xmotor 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-Xbearing holder.	3K-12-GZT -XTB-15	1	
16	X-rayaxis bracket	3K-12-GZT-XTB-16	2	
17	20Hard optical axis1	3K-12-GZT-XTB-17	2	
18	XYlimit 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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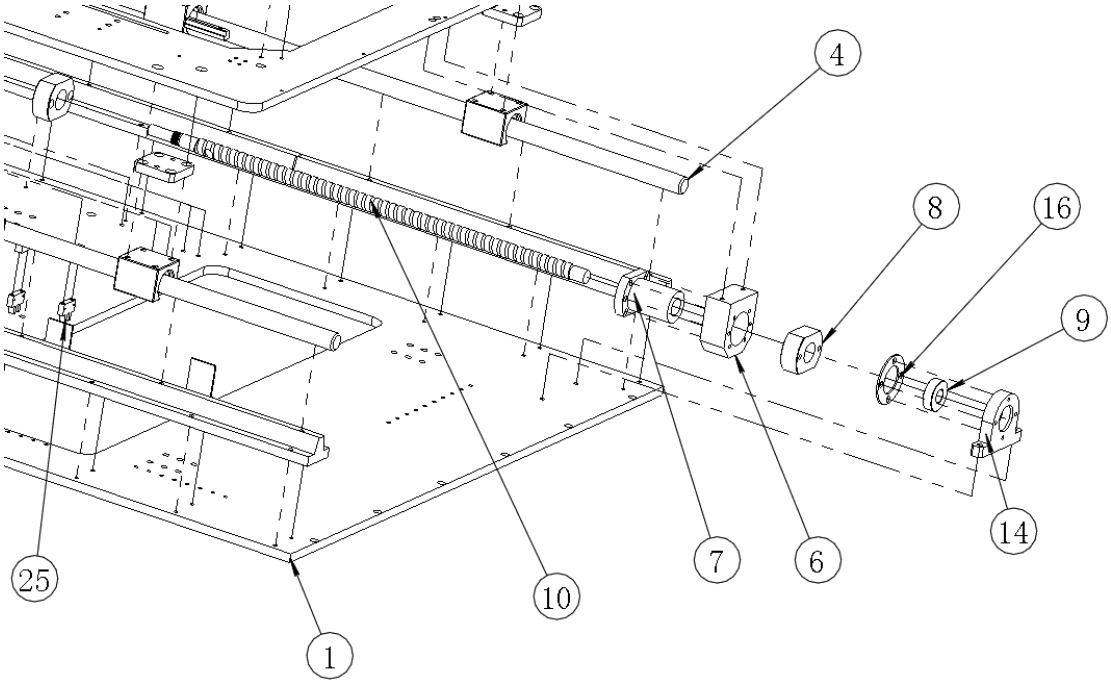
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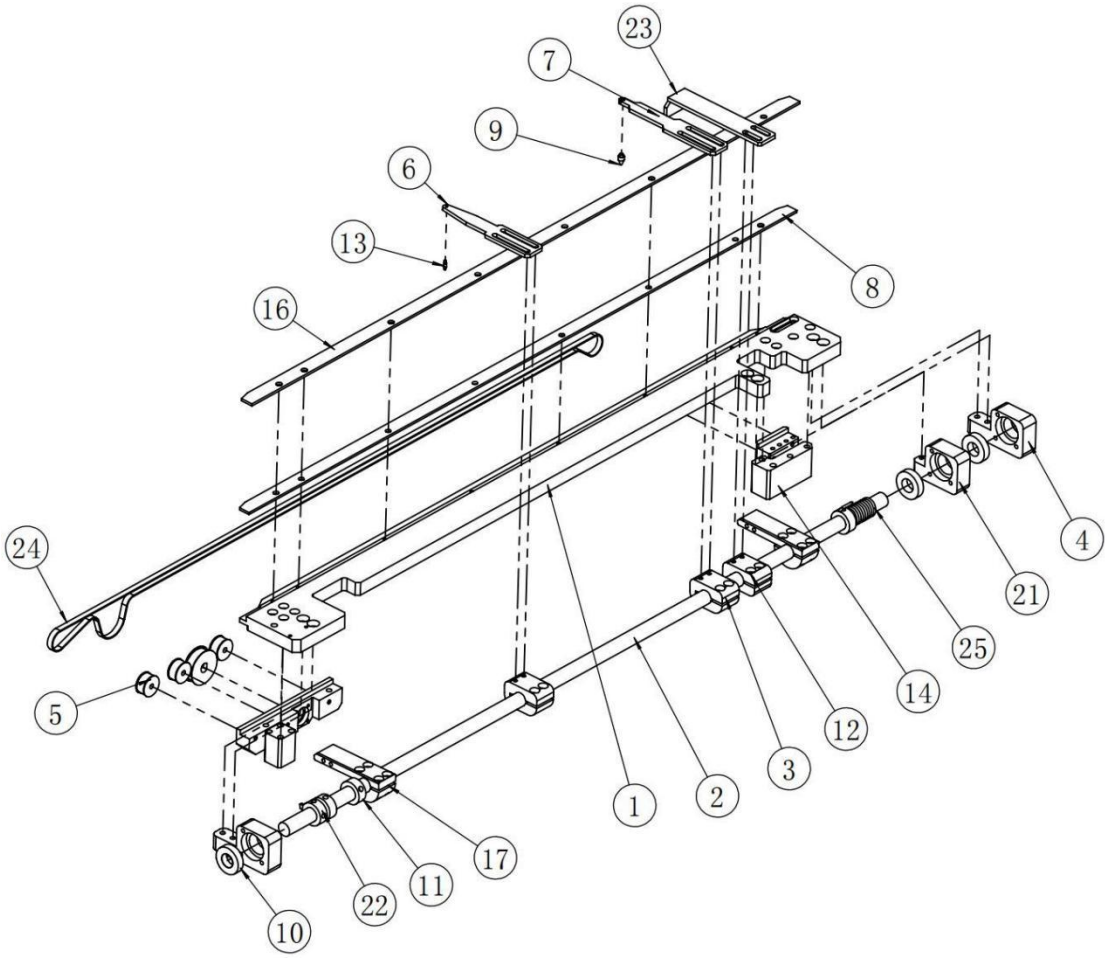
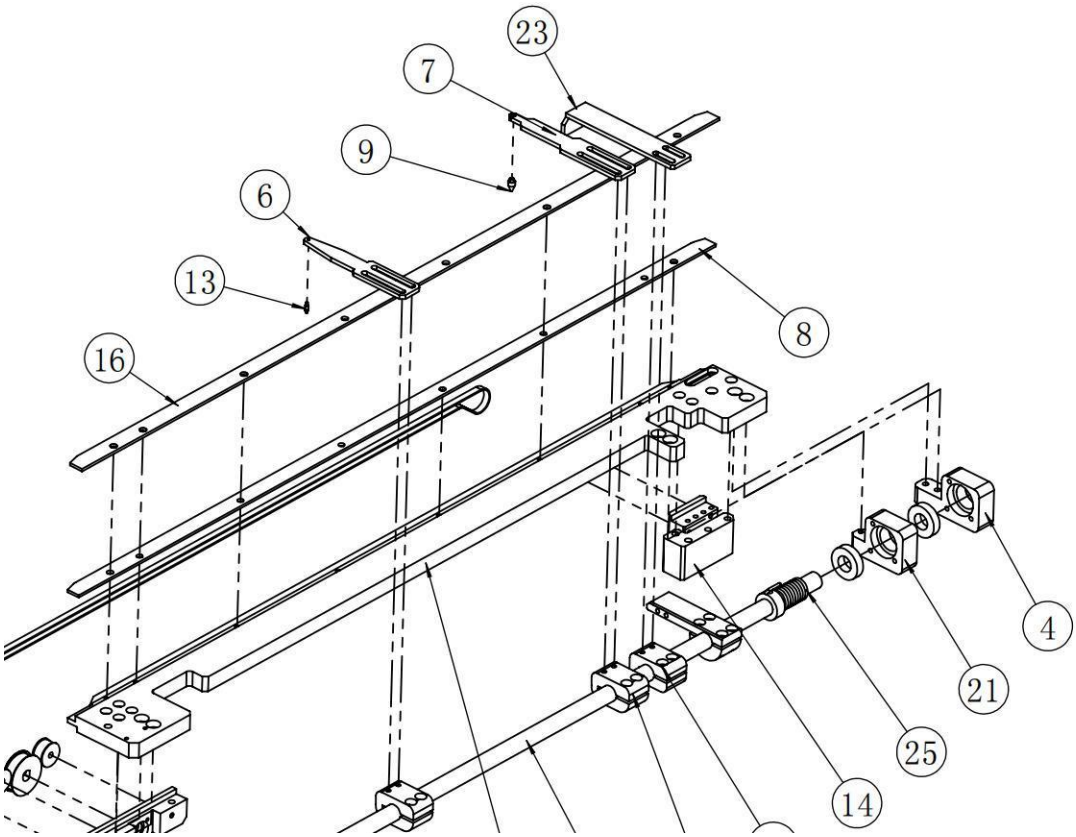
Y-platen assembly material list

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	Yscrew nut sleeve	3K-12-GZT-YTB-06	1	
7	sfs2010-3.8nut.	3K- 12-GZT-YTB-07	1	
8	Ybuffer glue.	3K-12-GZT-YTB-08	2	
9	bearing6202.	3K-12-GZT-YTB-09	3	
10	Yplatform screw	3K-12-GZT-YTB- 10	1	
11	Drag chain mounting plate	3K-12-GZT-YTB-11	1	
12	Xplatform motor fixing seat	3K-12-GZT-YTB-12	1	
13	3KSslider block	3K-12-GZT-YTB-13	4	
1 4	Xscrew bearing seat1.	3K-12-GZT-YTB-14	1	
15	IST-Xbearing holder.	3K-12-GZT-YTB-15	1	
16	bearing cap	3K-12-GZT-YTB-16	2	
17	Transmission optical axis8	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	XYlimit sensor	3K-12-GZT-YTB-26	3	

3. Front rail assembly

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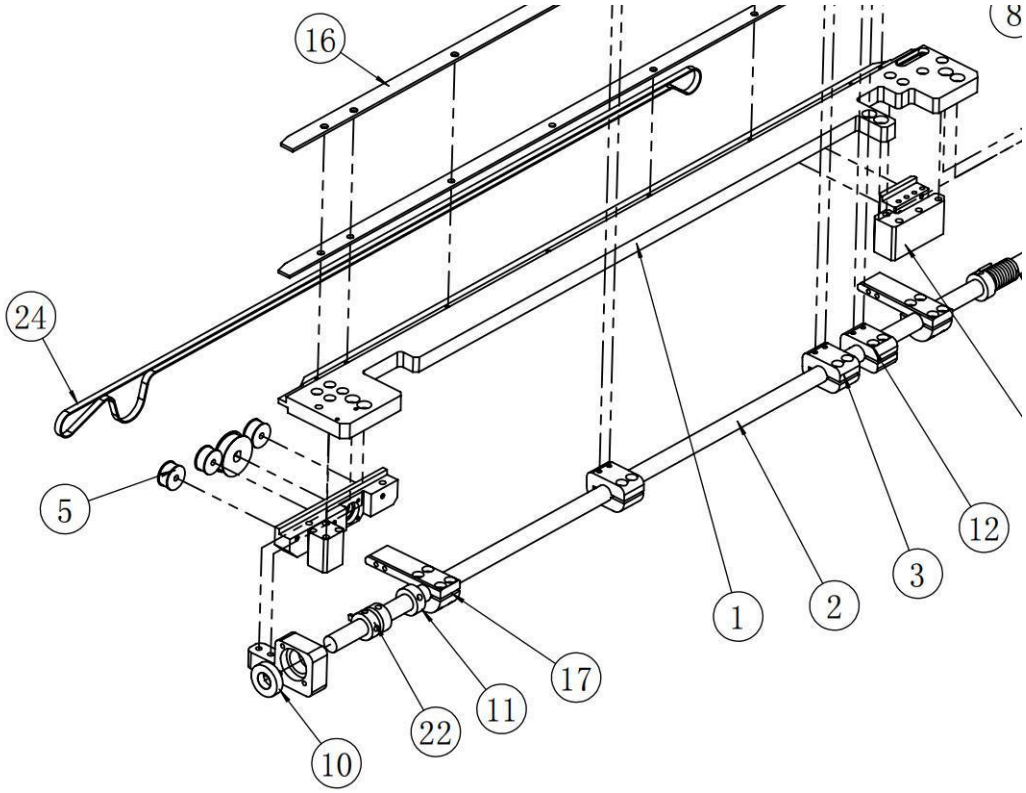
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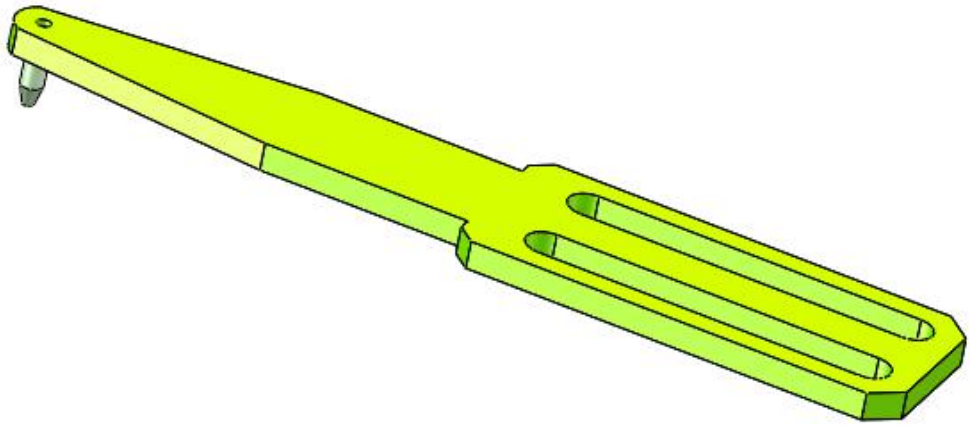
Front rail material list

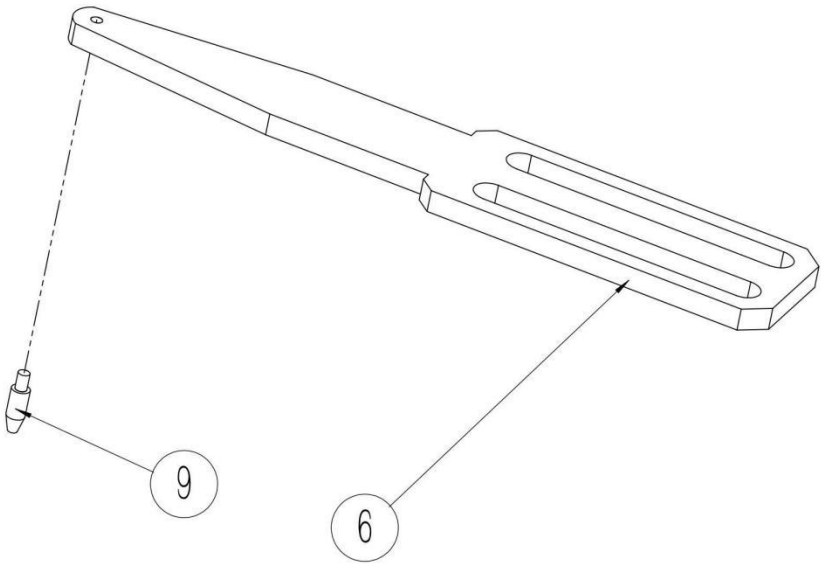
item number	part number	description	quantity	remarks
1	front guide plateA..	3K-12-GZT-QDG-01	1	
	212Axis	.. 3K-12-GZT-QDG		
3	clamp block4..	3K-12-GZT-QDG-03	2	
4	clamp blockB:	3K-12-GZT-QDG-04	2	
5	small pulley	.. 3K-12-GZT-QDG		
6	positioning plate..aperture	09 3K-12-GZT-QDG		
7	longer section positioning piece	110 3K-12-GZT-QDG		
	Stainless steel8	..09 3K-12-GZT-QDG		
9	PositioningPIN--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 blockB.	3K-12-GZT-QDG-15	1	
16	lower stainless steel plateA.	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

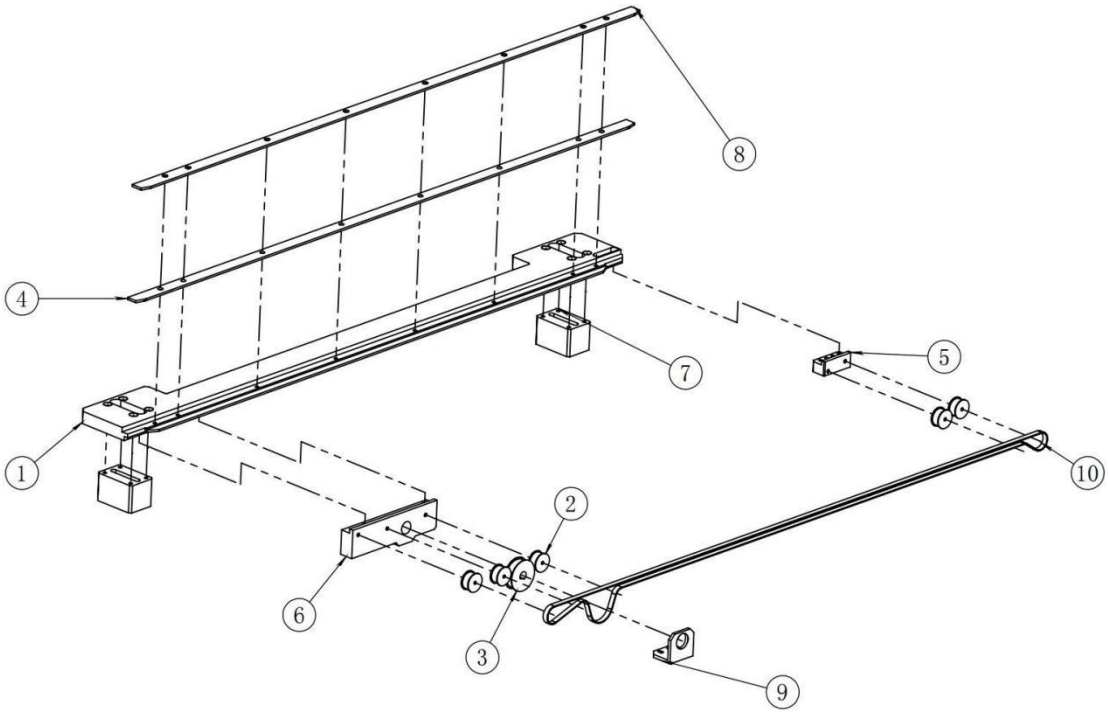


positioning PIN-universal bill of materials

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

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

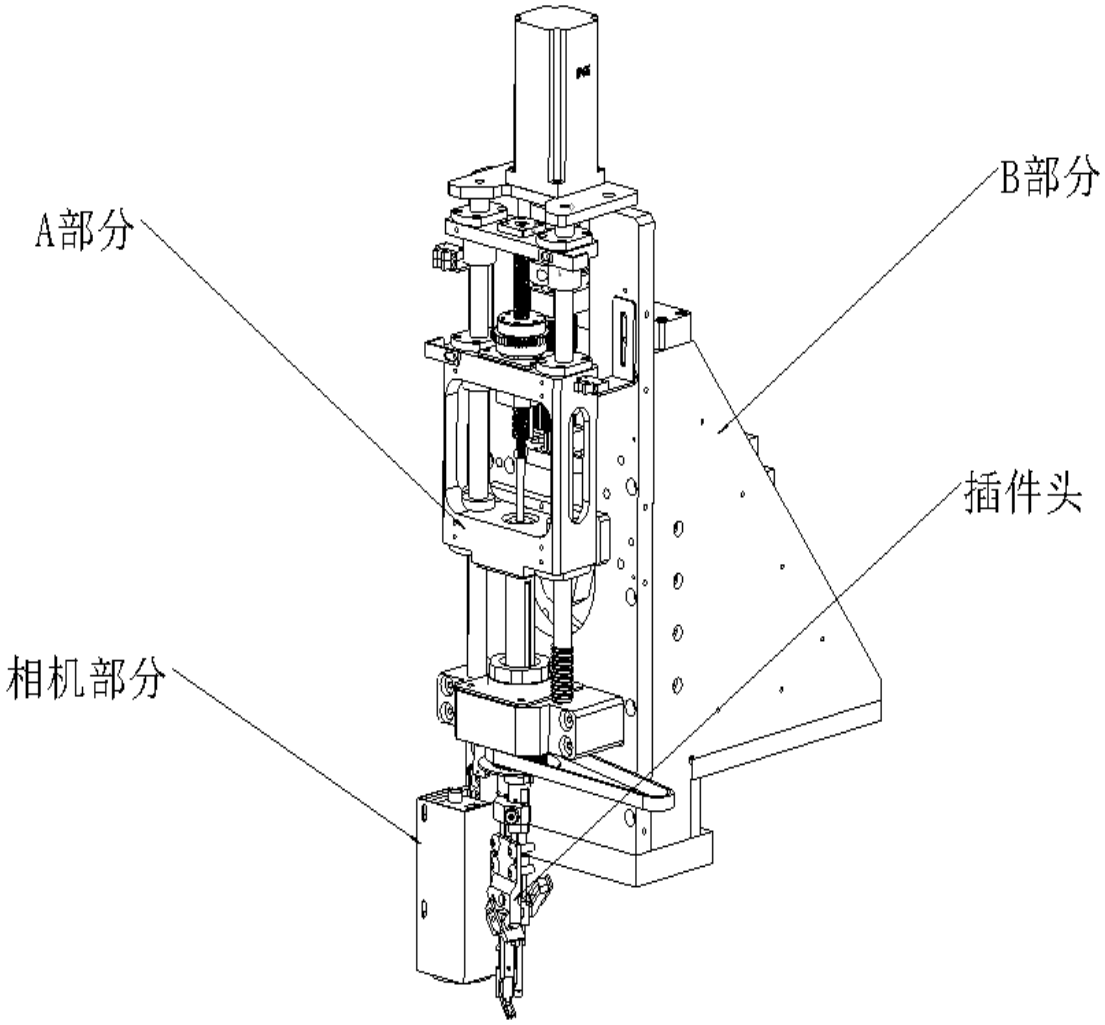
4. Rear rail assembly



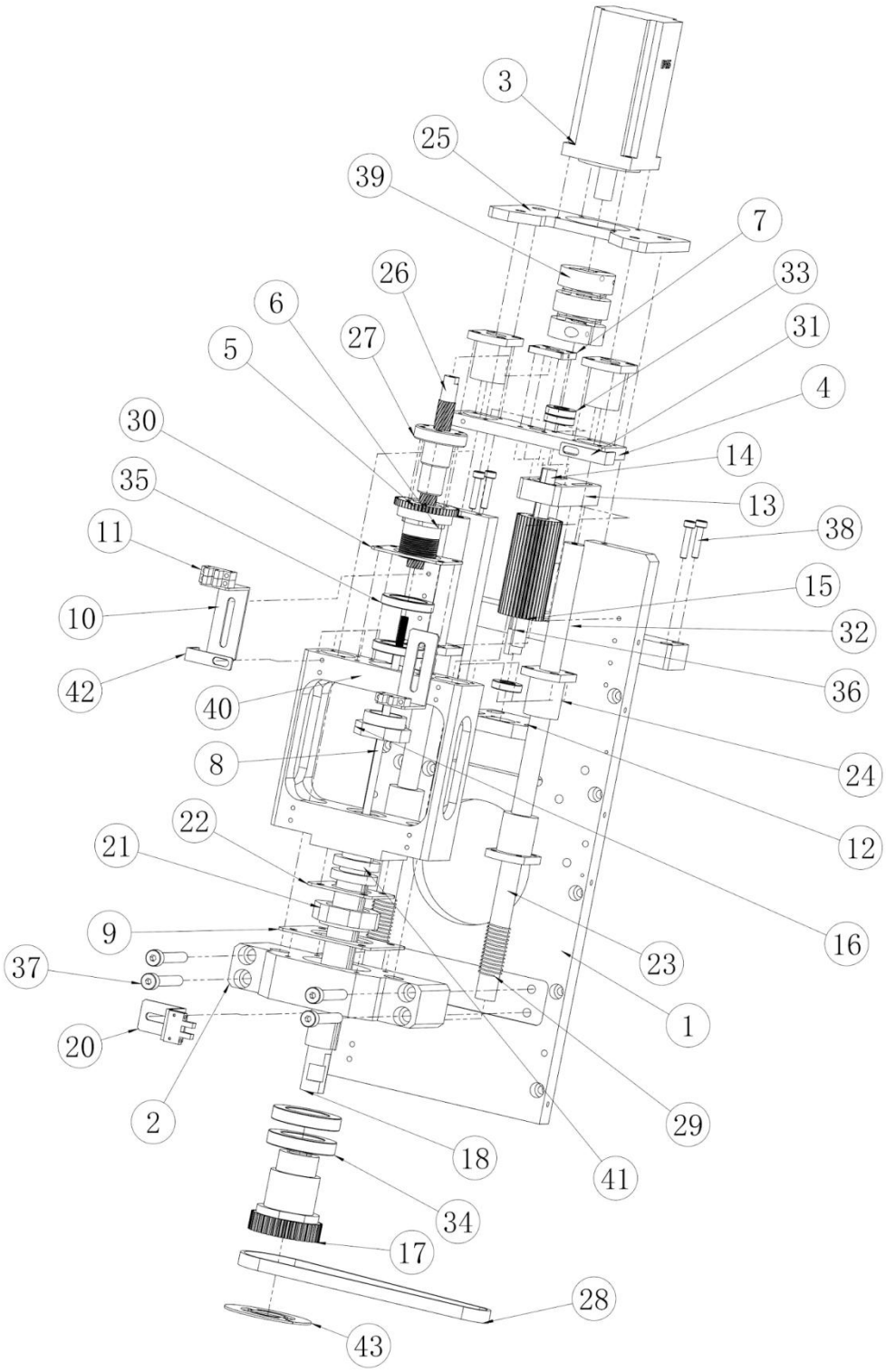
Rear rail material list

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 plateA.	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	

Three, the head assembly



1. The head becomes part A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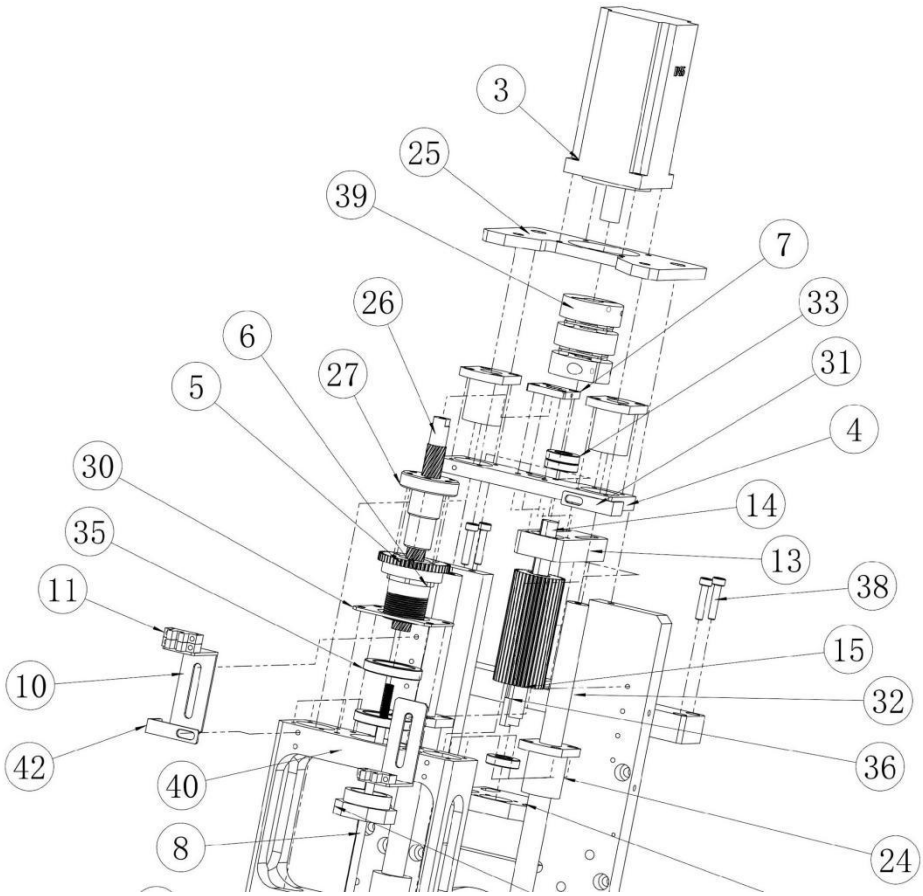
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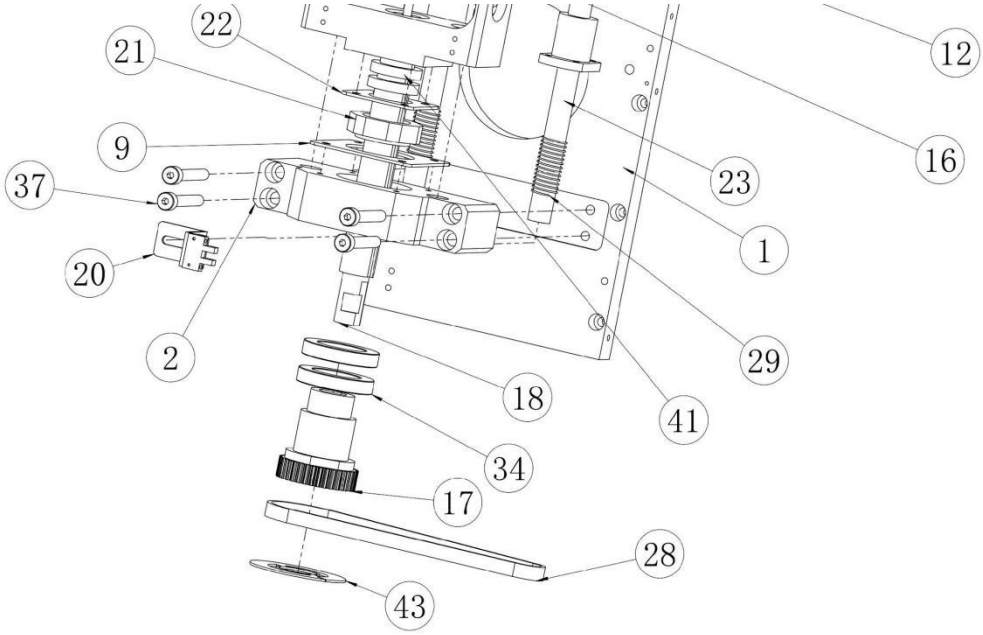
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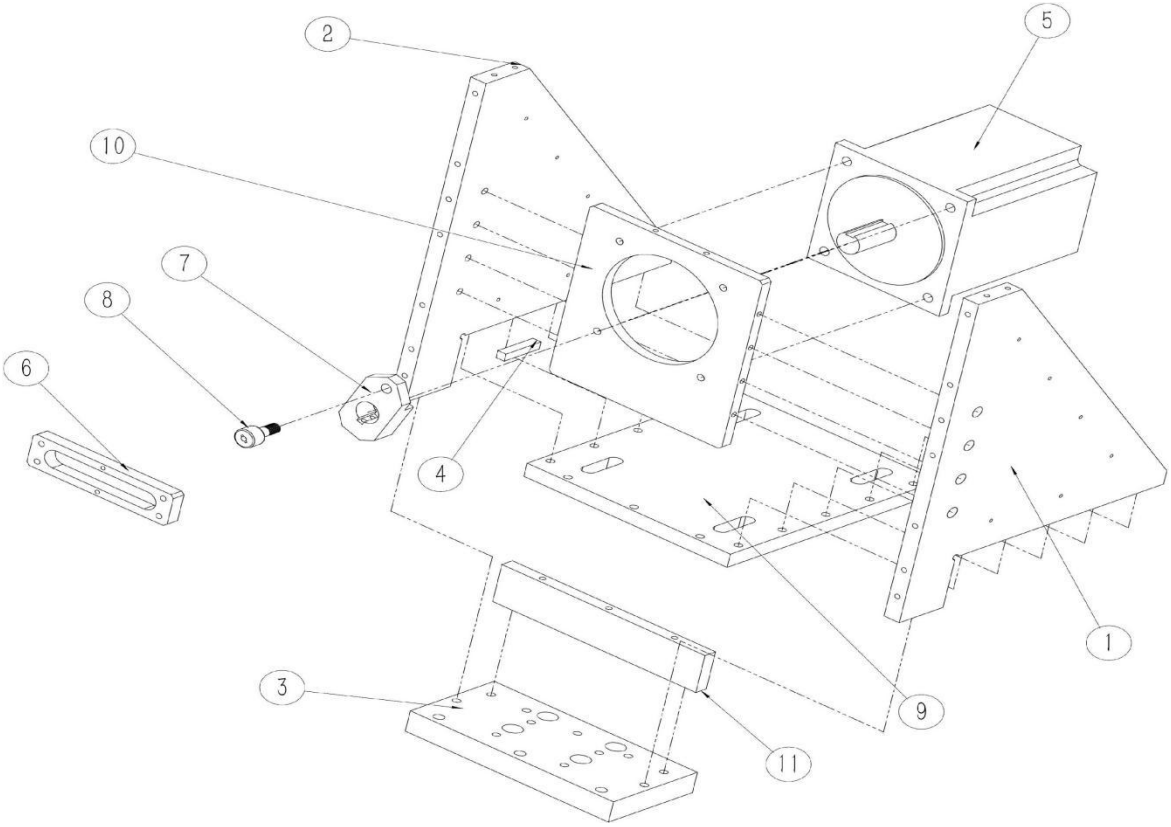
Head Assembly Part A Material List

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-		
	nip gear bearing seat	3K-12-TB-ABF-		
	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	160ptical 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

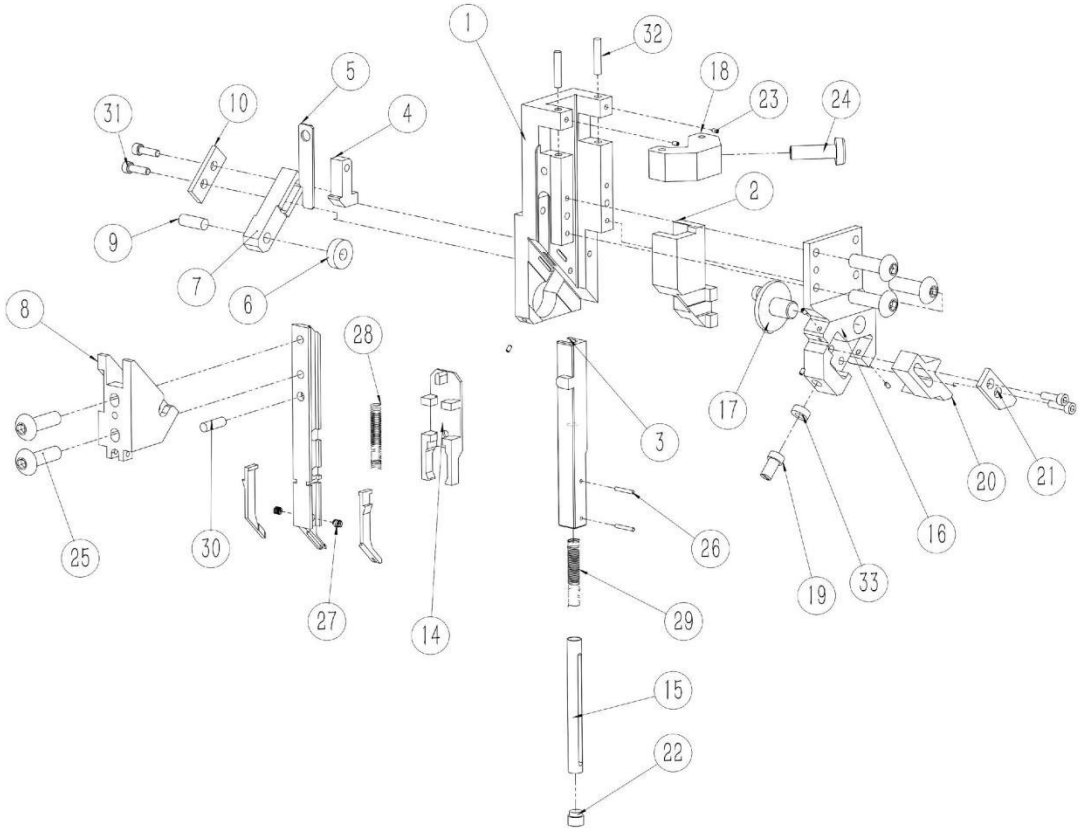


Head assembly-Part B material list

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	CTAcombination 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

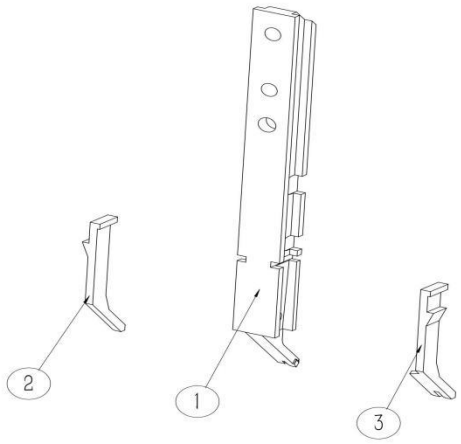


Auto Insertion head material list

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	3K-12-TB-CJT-08	1	

	slider			
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	grabgrabgrabLeft 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 mainassembly specifications:
10.0 Exploded view of main gripping device (including spacing 7.5; 5.0; 2.5)



10.0device 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	grabLeft 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	7.5grippinggripping Left gripping	3K-12-TB-ZCT- 02-7.5	1	
3	7.5Right grasp	3K-12-TB-ZCT-03-7.5	1	

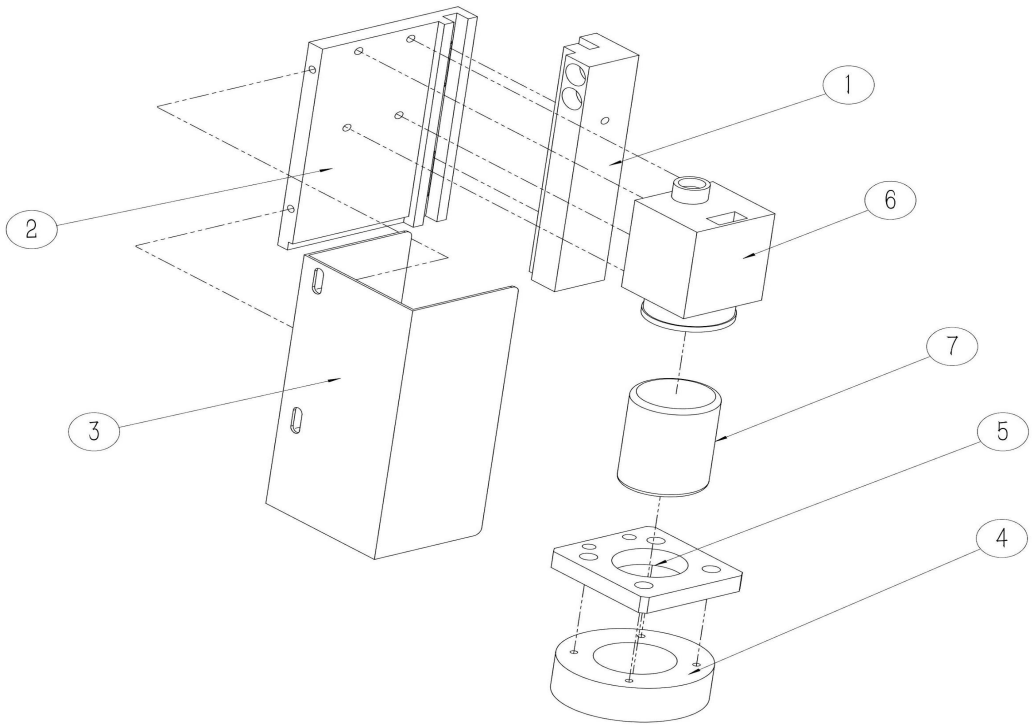
5.0device material list (including spacing 2.5)

Item No.	Part No.	Description	Quantity	Remarks
1	5.0lever	Main grippingMain 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 grippingMain 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

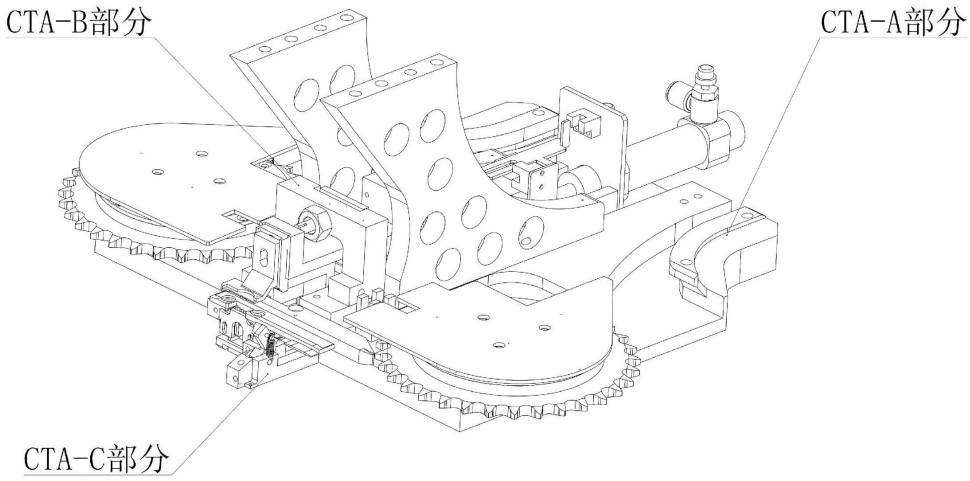


camera part of the material list of the camera part

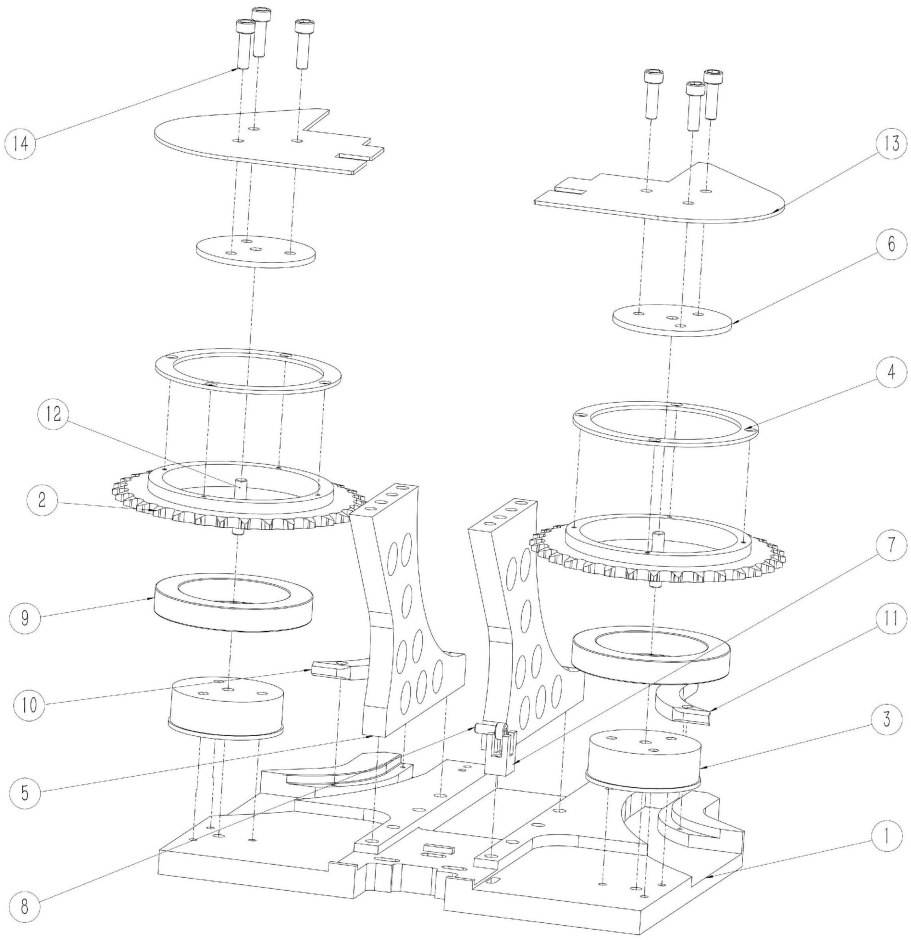
item number	part number	description	quantity	remarks
1	scanning head fixing block	3K-12-TB-CJT-01	1	
2	Scanning head fixed vertical	3K-12-TB-CJT-02	1	

	plateα			
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	

Fourth, CTA assembly



CTA-A part exploded view

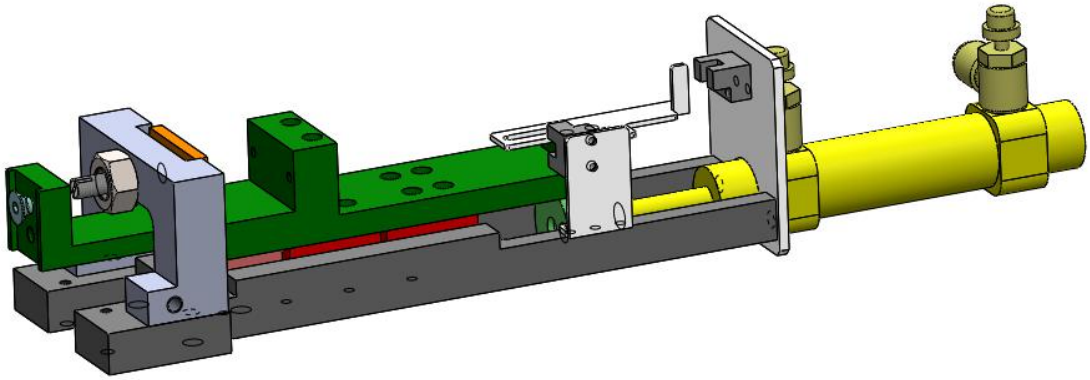


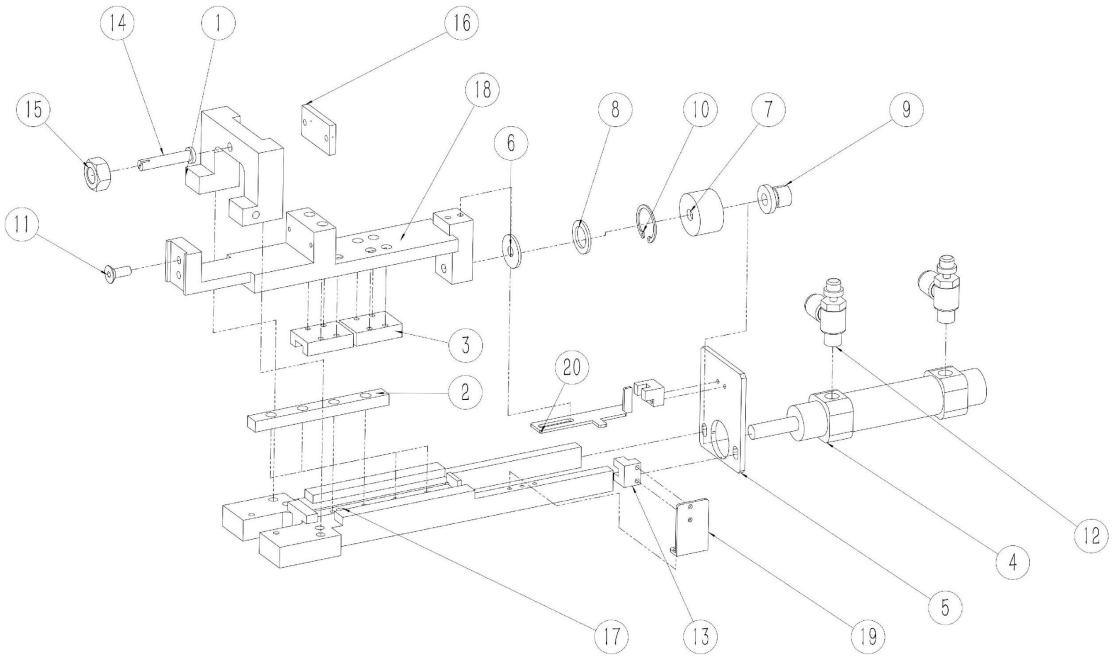
CTA-A part material list

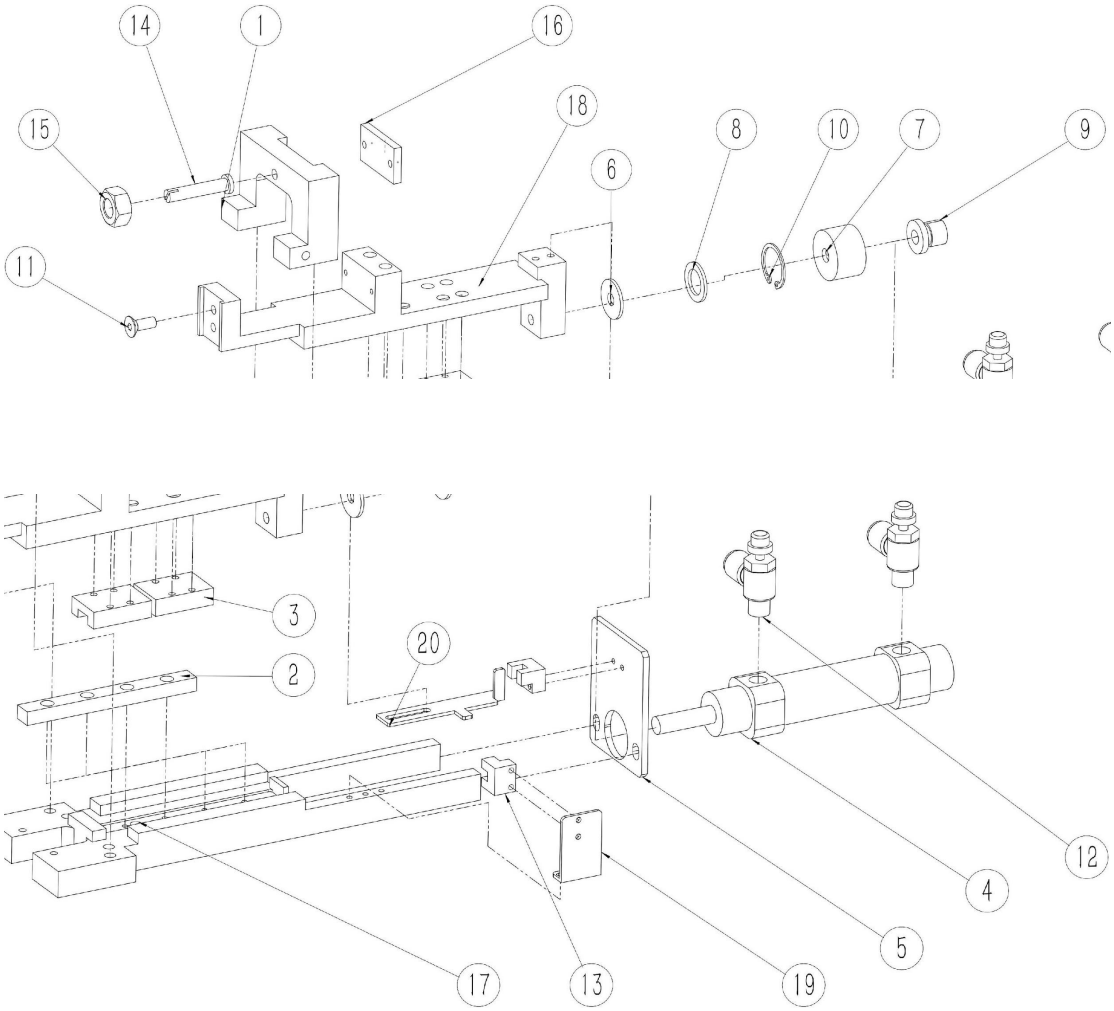
Item number	Part number	Description	Quantity	Remarks
1	CTAmain board	3K-12-CTA-A-01	1	
2	Sprocket gear	3K-12-CTA-A-02	2	
3	Sprocket bearing seat	3K-12-CTA-A-03	2	
4	Sprocket bearing cover	3K-12-CTA-A-04	2	
5	Support frame1	3K-12-CTA-A-05	2	
6	Sprocket gasket	3K-12-CTA-A-06	2	
7	screw limit block	3K-12-CTA-A-07	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





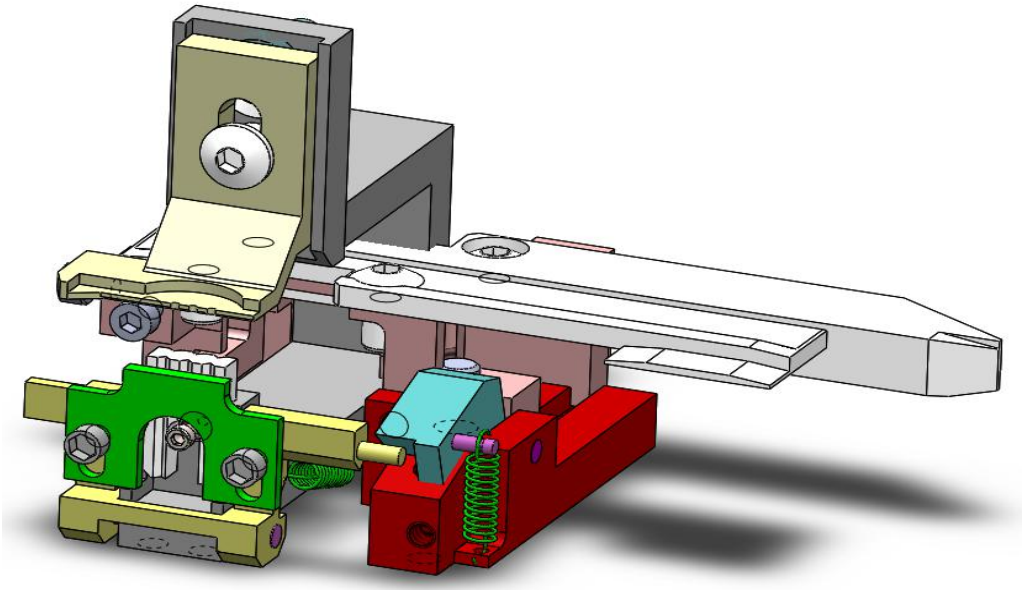


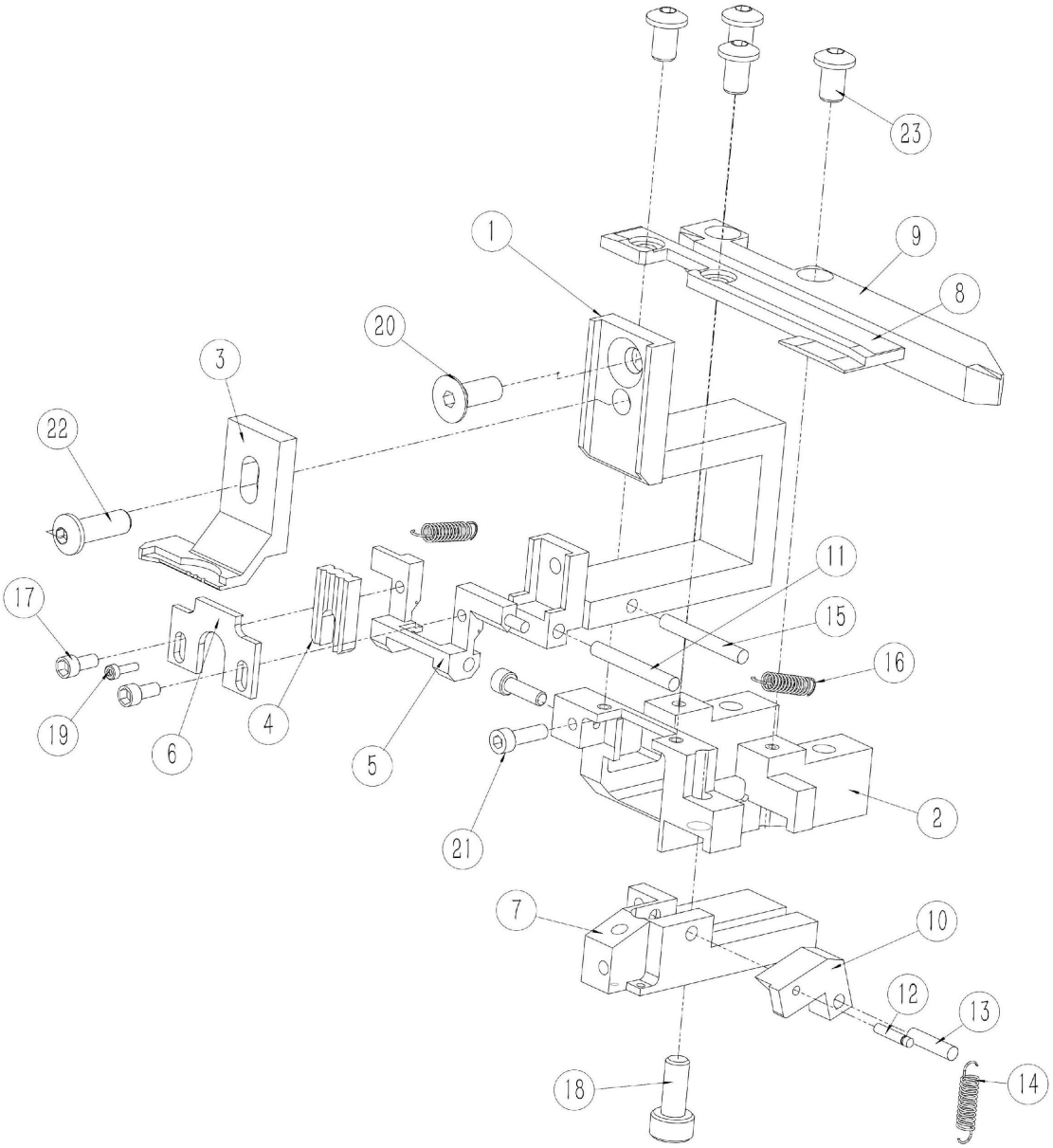
CTA-B Part Material List

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 Youli 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	CTAbuffer glue	3K-12-CTA-B-16	1	
17	CATslider mounting seat	3K-12-CTA-B-17	1	
18	Feeding bracket1	3K-12-CTA-B-18	1	
19	CTAsensor mounting piece	3K-12-CTA-B-19	1	
20	CTAsensor sheet	3K-12-CTA-B-20	1	

CTA-C part exploded view

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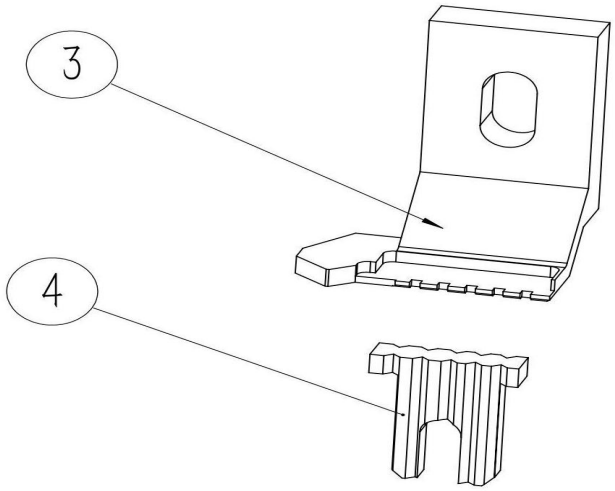
CTA-C part material list

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-	3K-12-CTA-C-03-5.0	1	

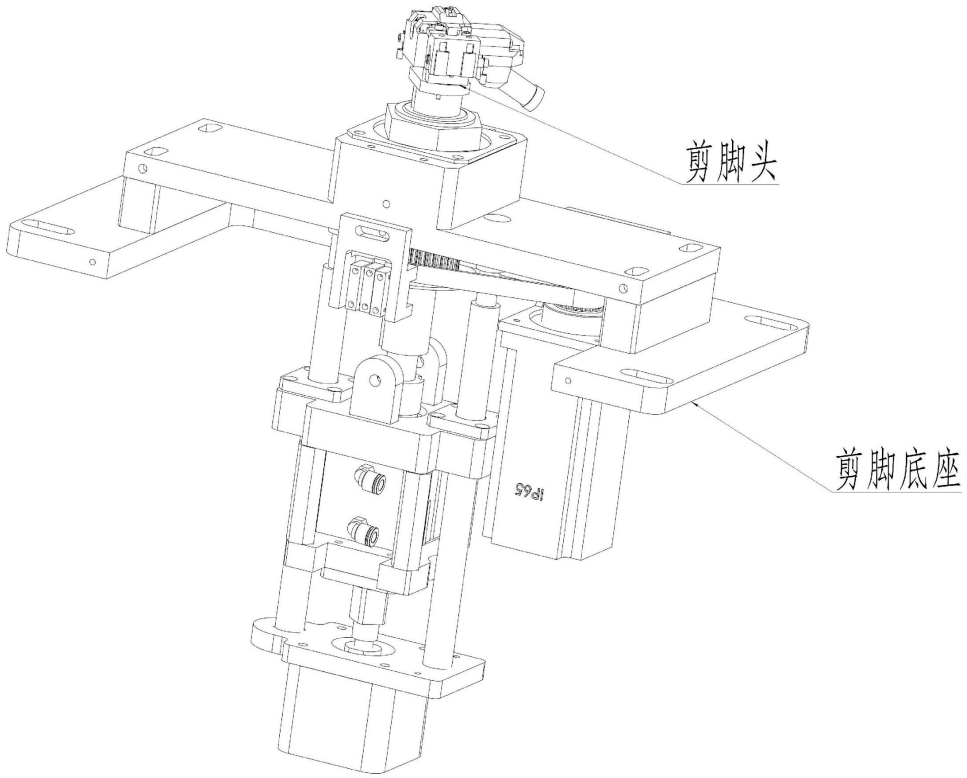
	5.0			
4	Wave pad-5.0	3K-12-CTA-C-04-5.0	1	

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

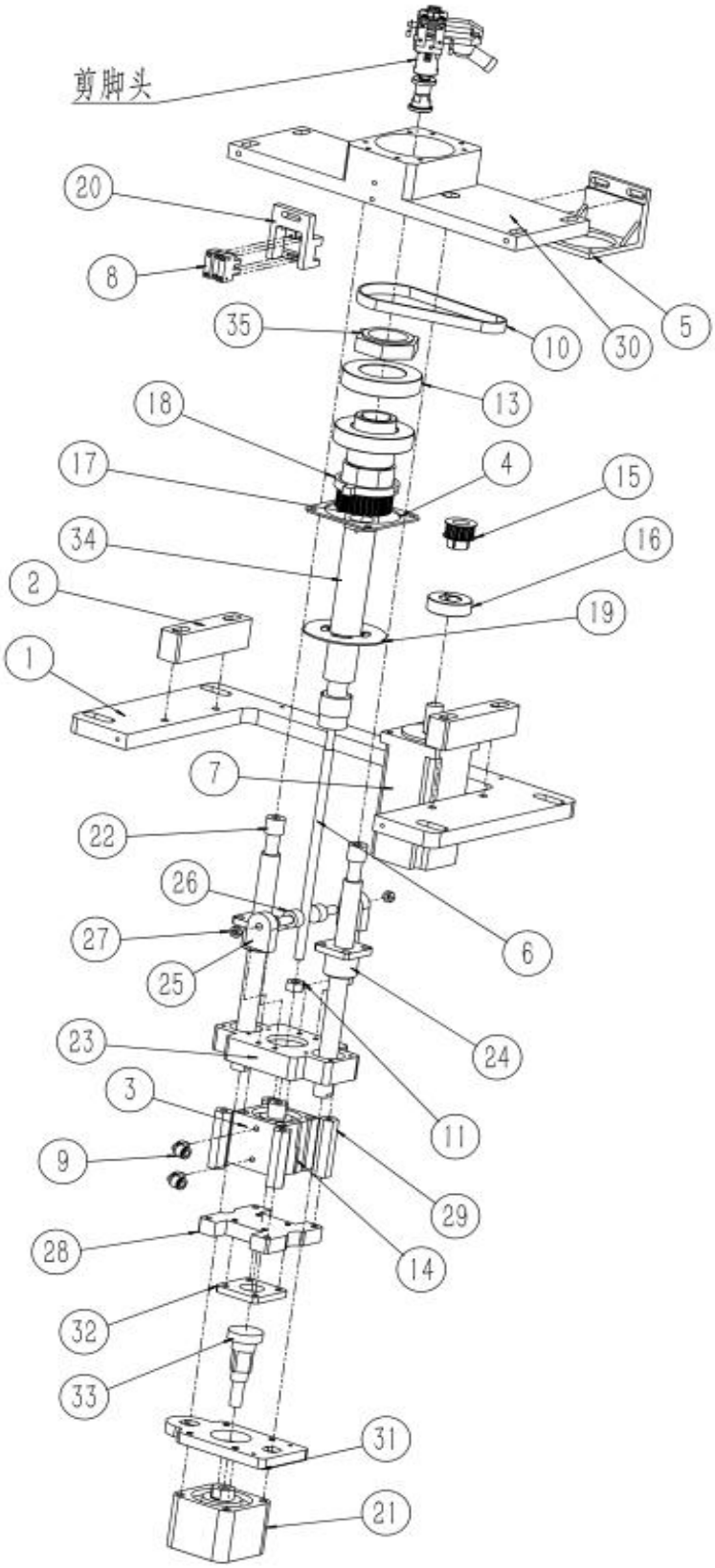
3.5 pusher, wave pad material list

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	

4. Scissor foot assembly



Scissor foot base exploded view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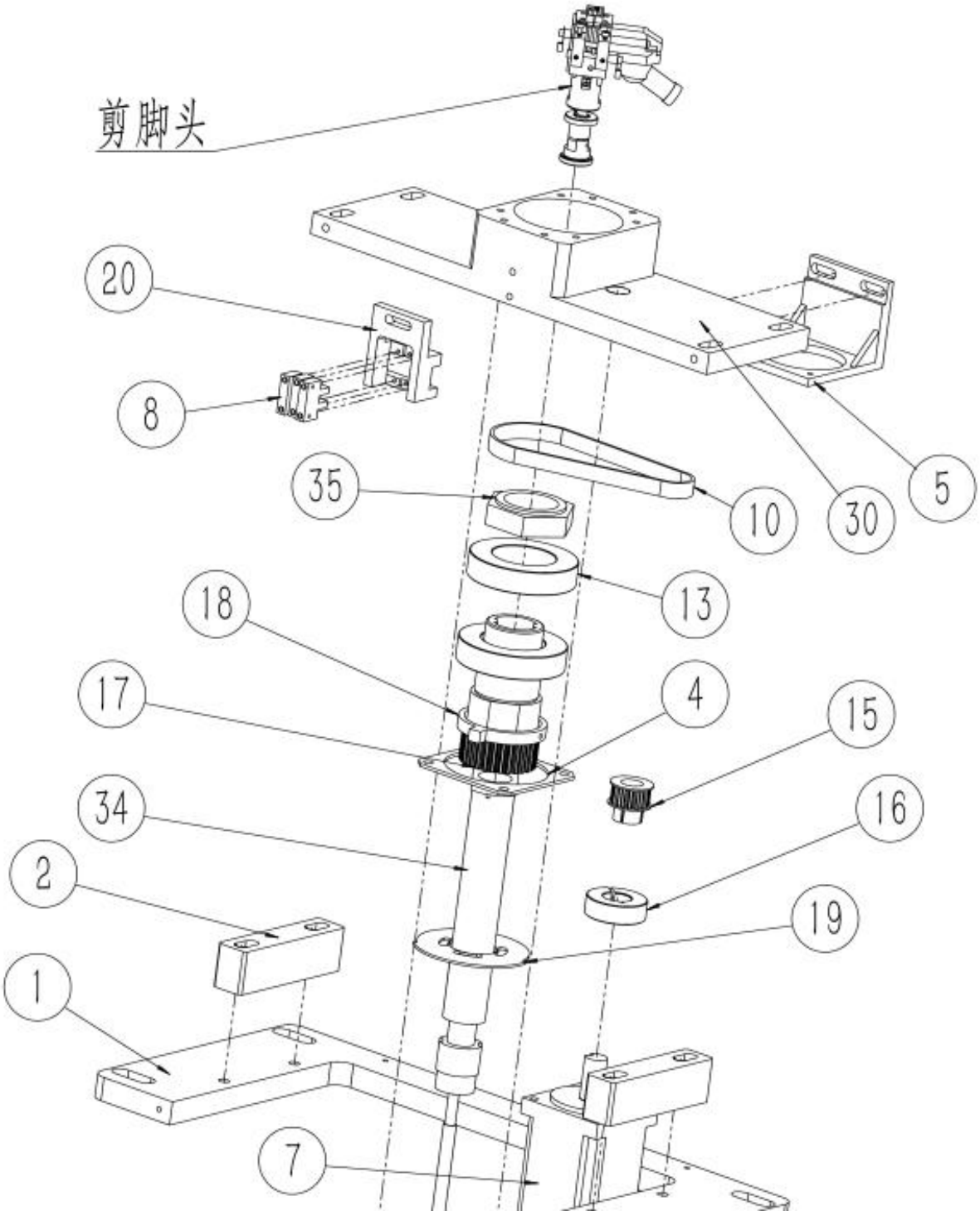
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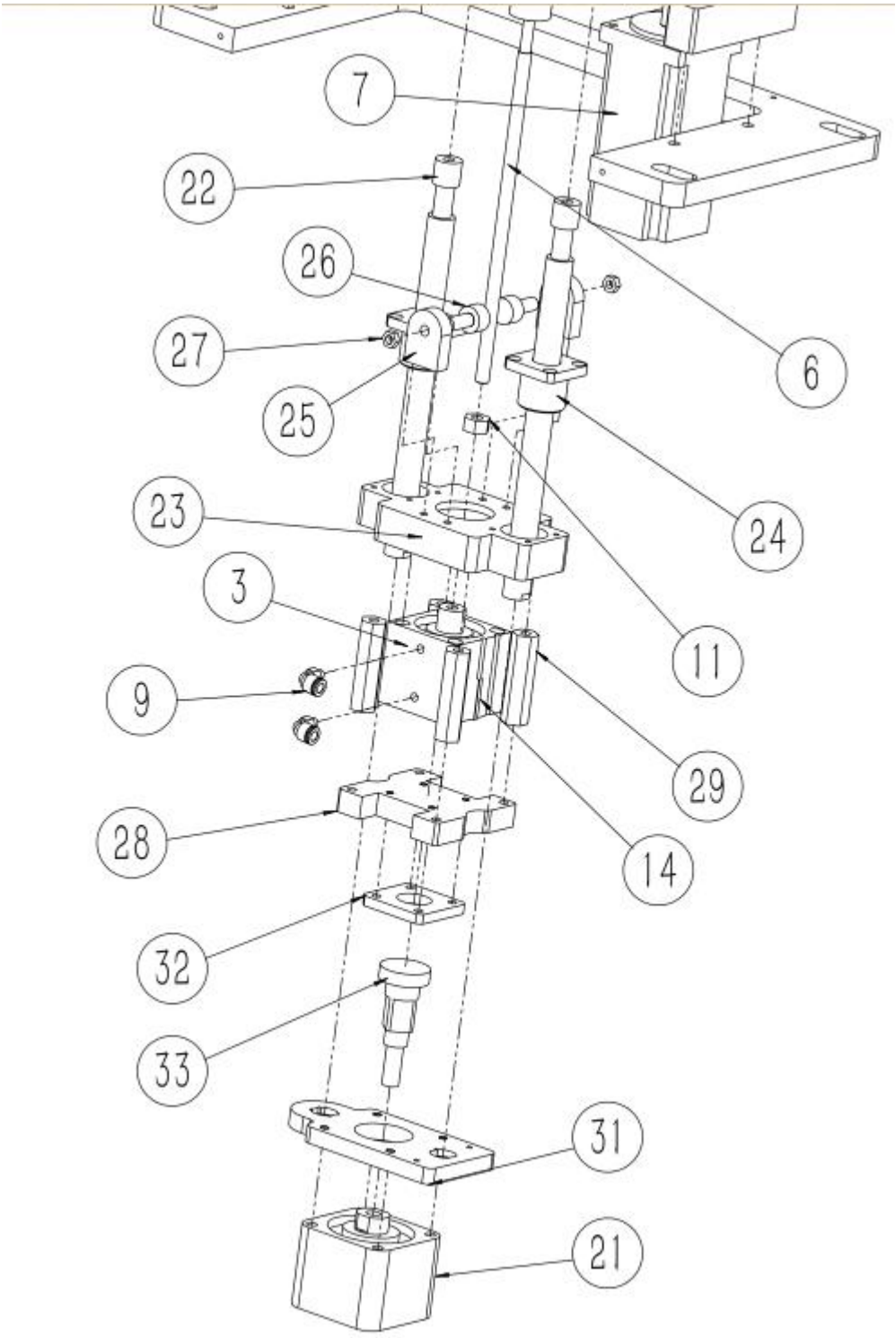
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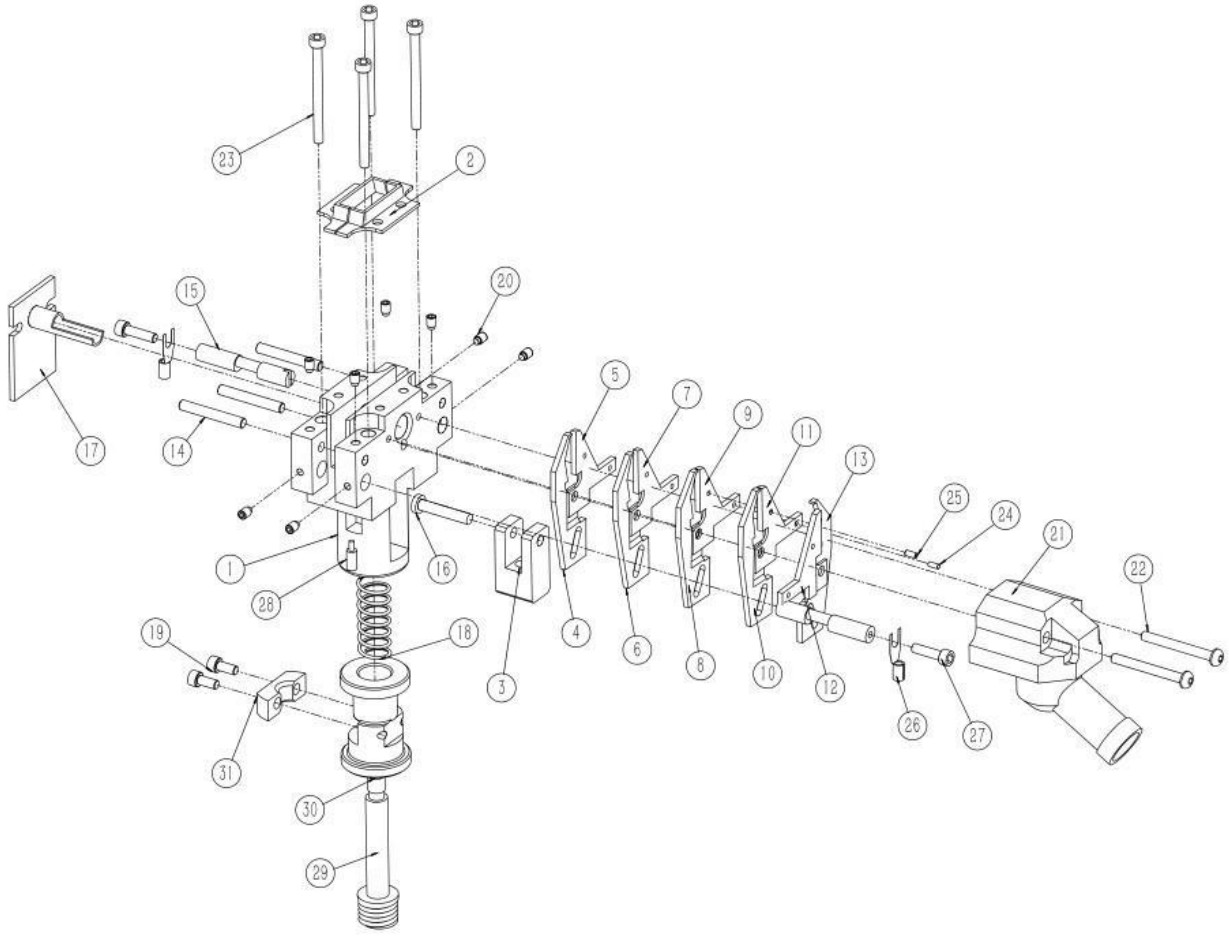
Scissor base material list

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 pulleyA	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	

Cut toe head exploded view



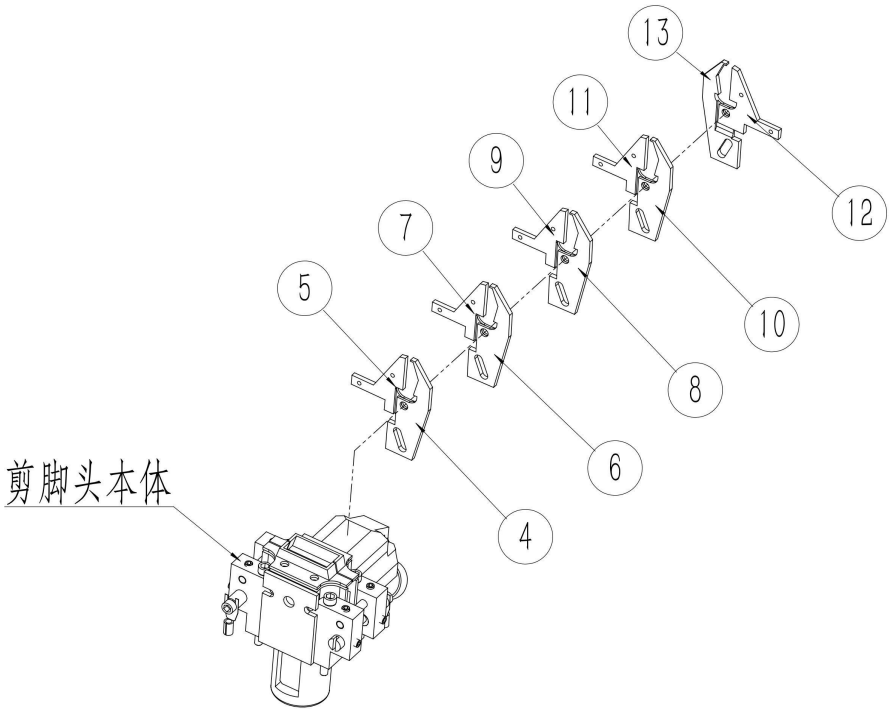
ScissorMaterial List

Item No.	Part Number	Description	Quantity	Remark
1	ScissorBody	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	easyparts
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	Easyparts
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 pinl	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 pinspecifications BOM

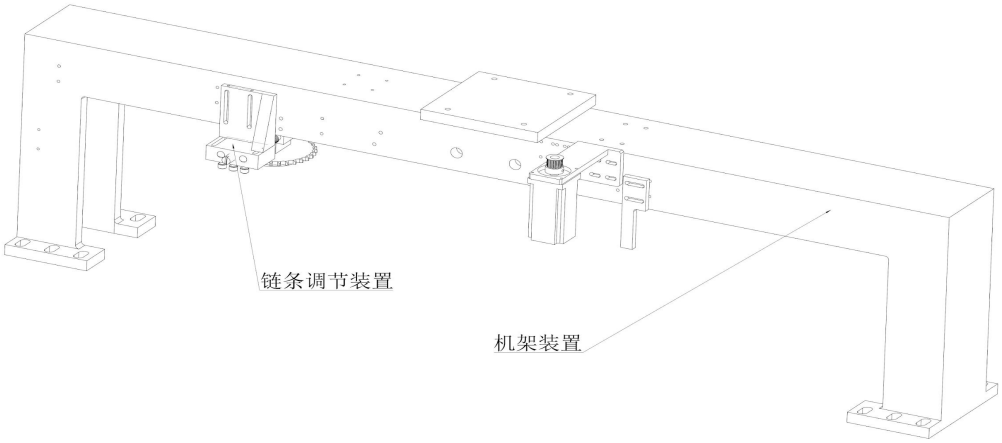
number item	Part number		number of	Remark
4	movable bladeshear pin	5.0 3K-12-JJT-08-5.0		consumables
5	shear pin fixed blade5.0	3K-12-JJT-09-5.0Wearable	1	parts
6	Shear foot movable blade2.5	3K-12-JJT-10-2.5Wearable	1	parts
7	Shear foot fixed blade2.5	3K-12-JJT-11-2.5	1	Easy Damaged parts
8	Scissor foot fixed blade	3K-12-JJT-12Wearable	1	parts

9	Scissor foot movable blade	3K-12-JJT-13Wearable	1	parts

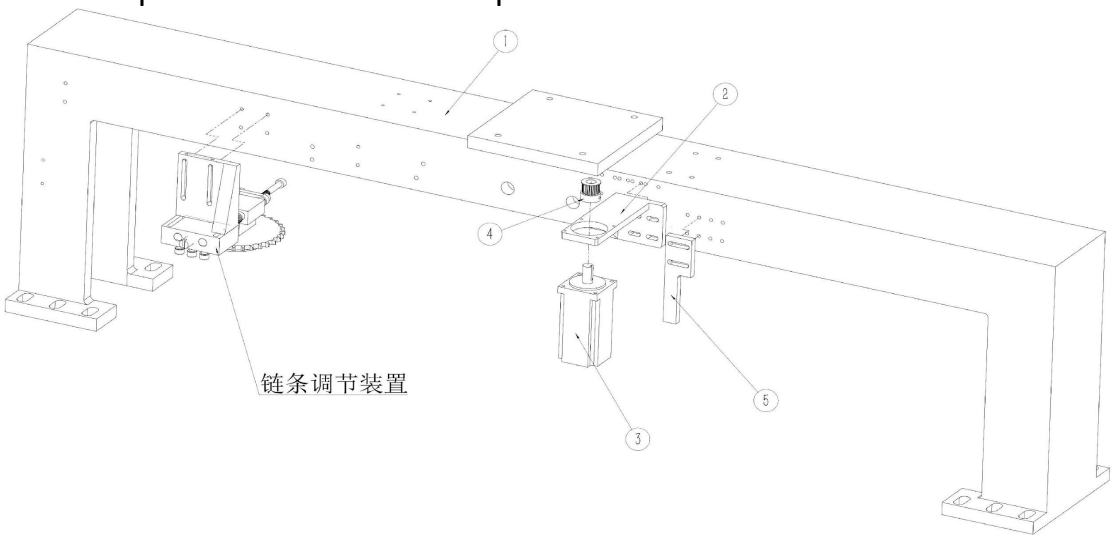
3.5 Scissor blade specifications Material list

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

5. Cross beam assembly



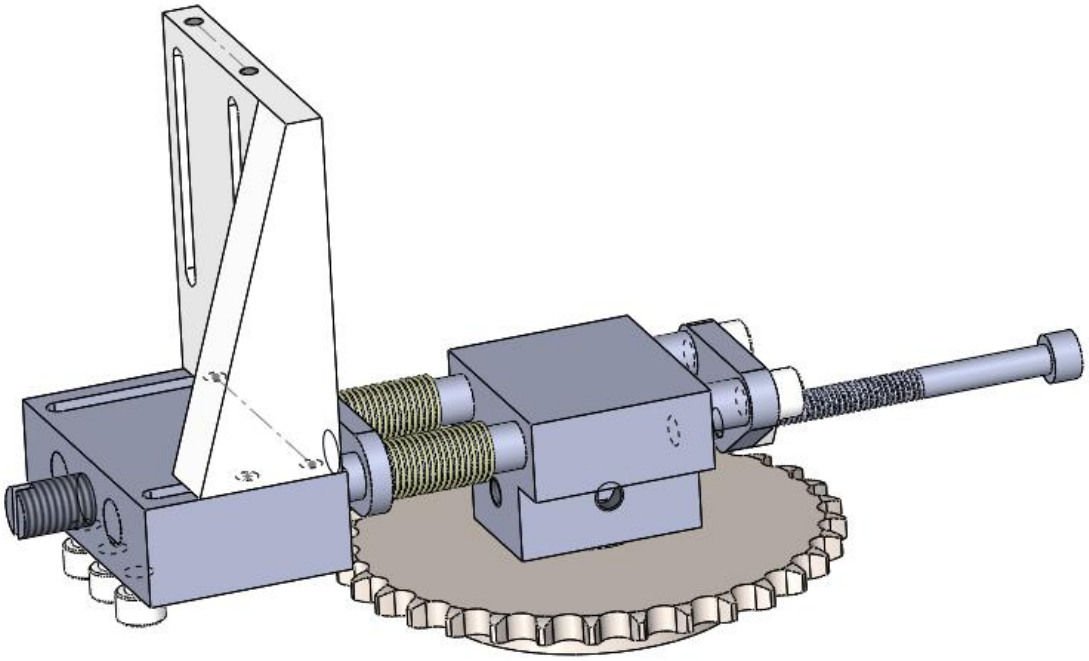
frame Exploded view of the components of the

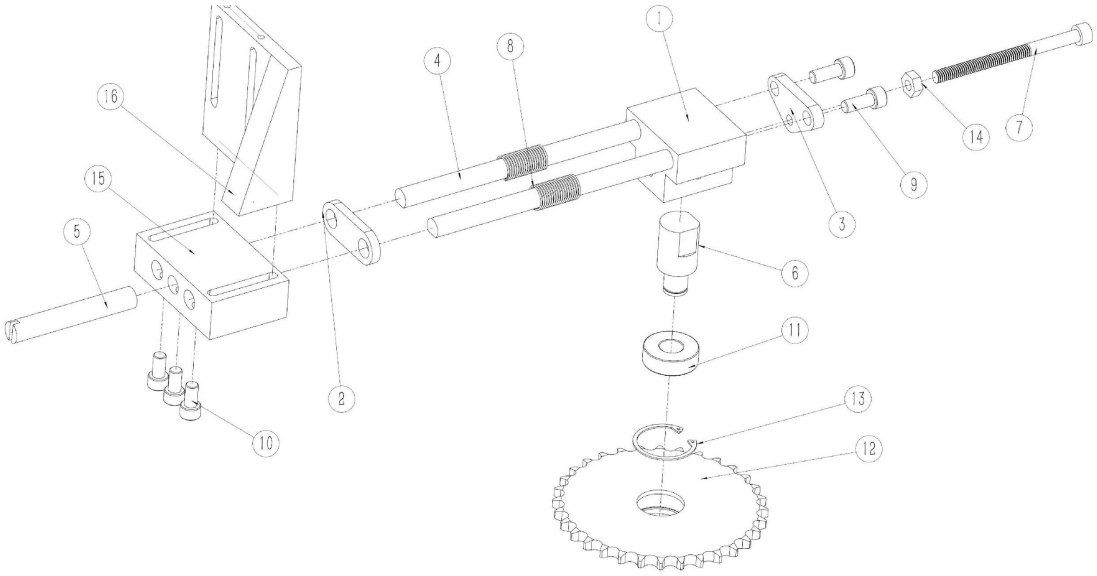


rack device material list

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

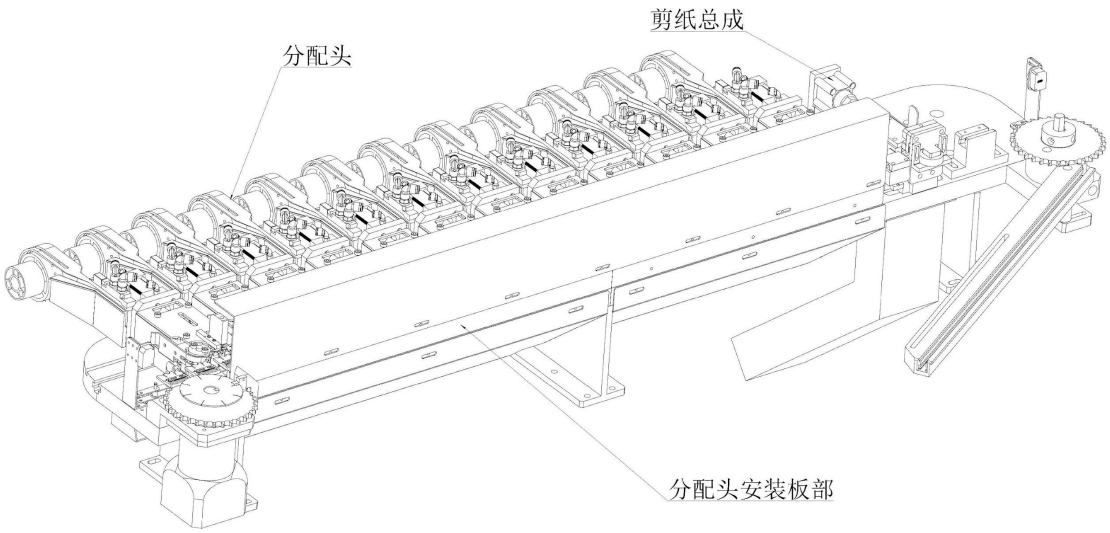




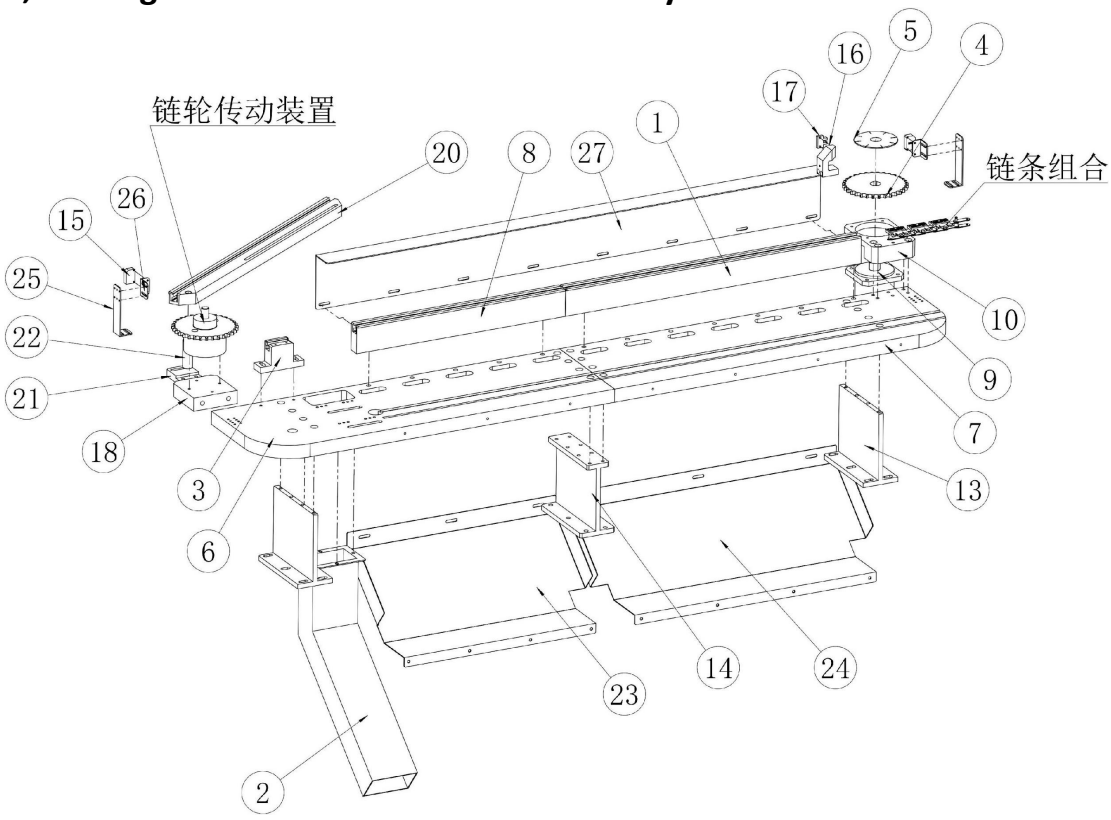
chain regulator chain regulator material list

item number	part number	description	quantity	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	

Seven, feeding assembly



1, feeding installation mechanism assembly

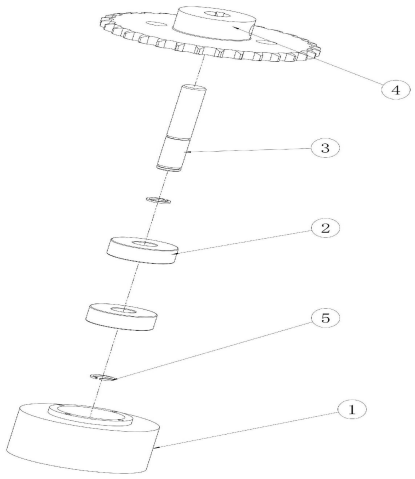


distribution head mounting plate material list

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 blockof 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 capA	3K-12-FPTAZB-12	1	
13	Distributing head mounting plate support block	3K-12-FPTAZB-13	2	
14	Distributing head mounting plate support blockA	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	Rightplate	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	

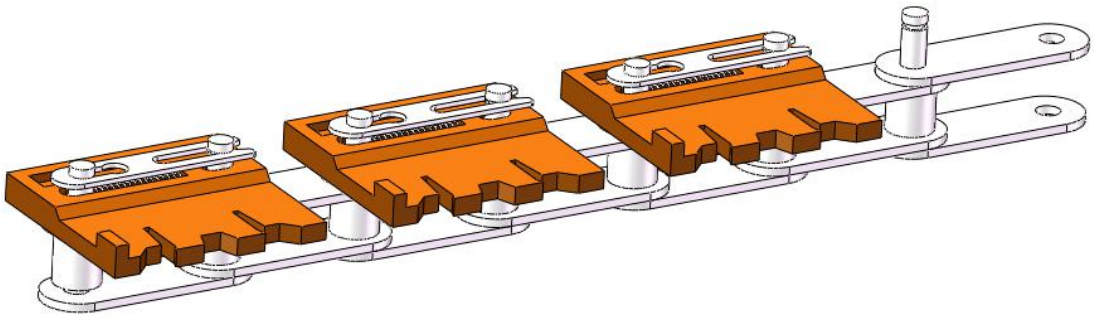
2. Sprocket drive assembly

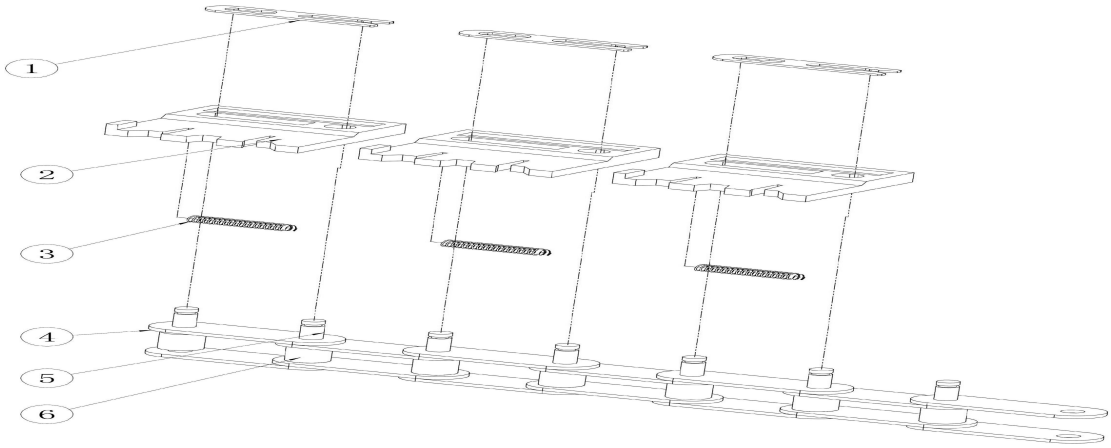


sprocket drive material list

item number	part number	description	quantity	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

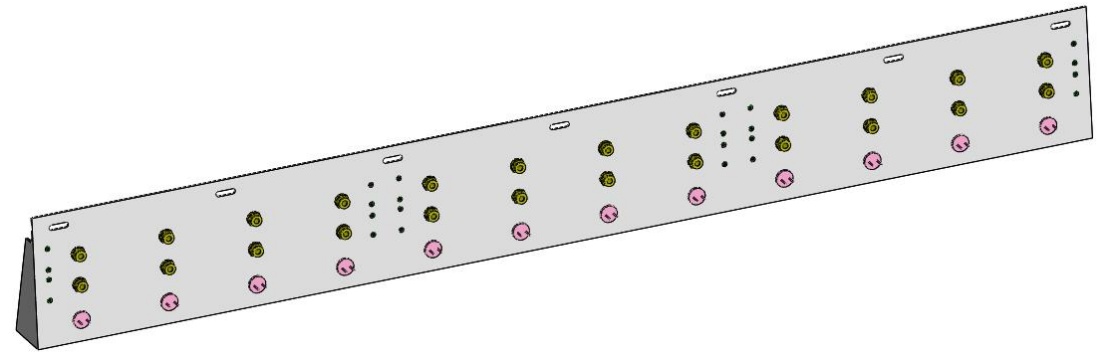
item number	part number	description	quantity	remarks
1	U-shaped long circlip	3K-12-LTZH-01		
2	Chain clip	3K-12-LTZH-02		Remarks good specifications
3	Spring	3K-12-LTZH-03		see next page
4	Chain	3K-12-LTZH-04	1	
56				

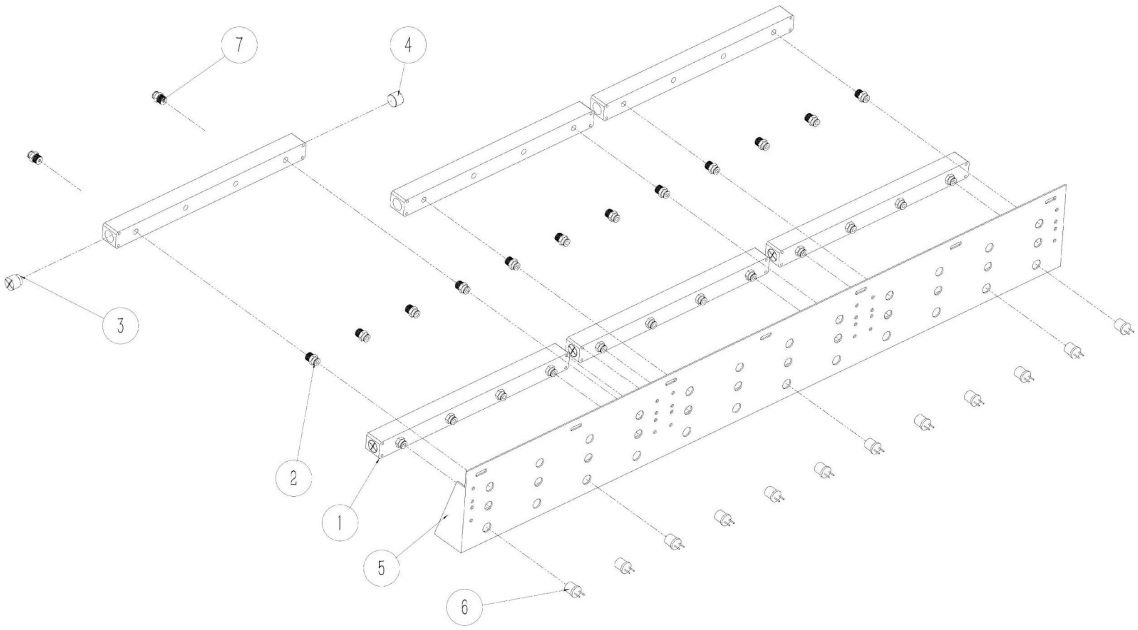
Chainandfolders specifications exploded view BOM

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



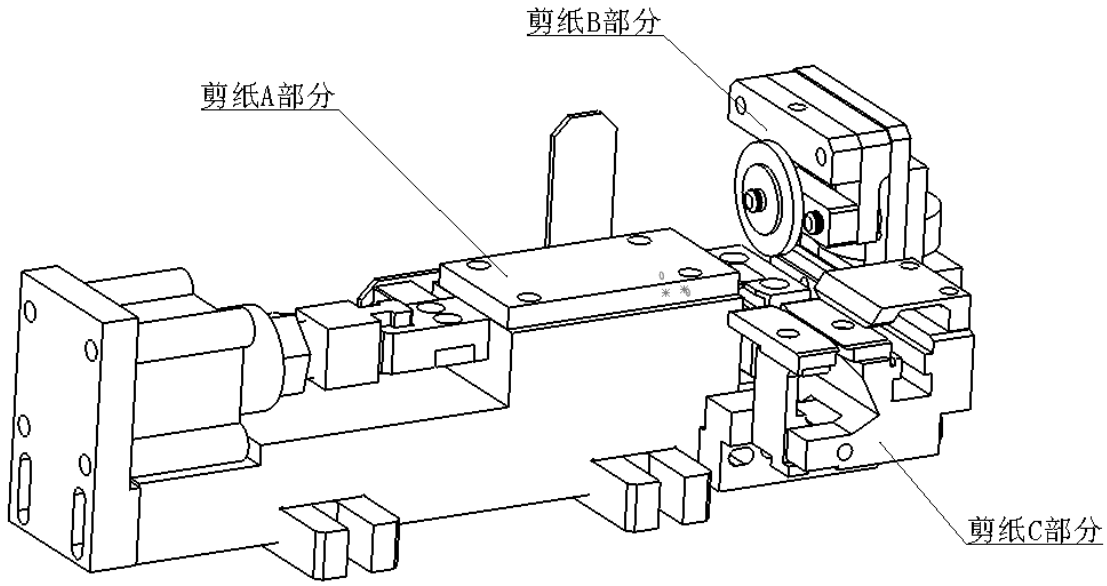


air connection plate Part of the bill of materials

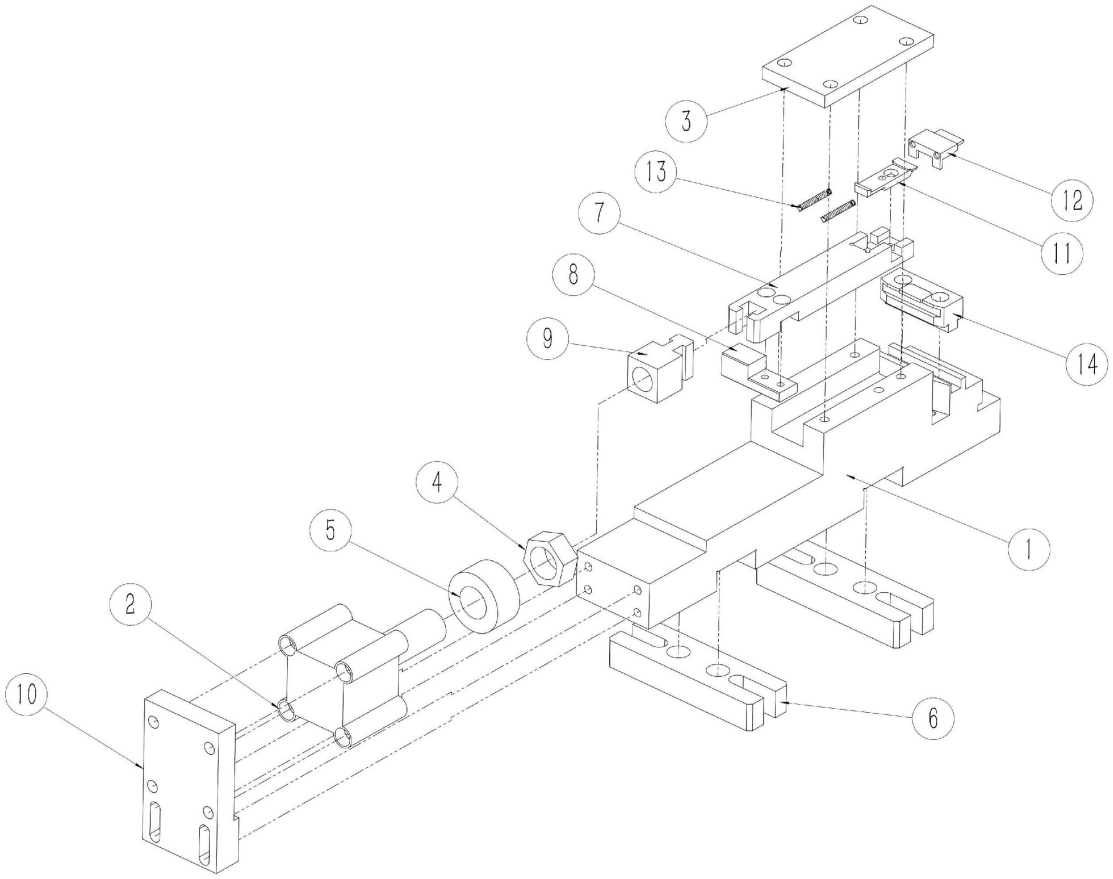
Item number	Part number	Description	Quantity	Remarks
1	Air distribution pipe	3K-12-JQBBF-01	6	
2	Steam pipe jointPC10-01	3K-12-JQBBF-02	24	
3	18Youli	Rubber Washer 3K-12-JQBBF-03	4	
4	Two-way pipe tail screw	3K-12-JQBBF-04	8	
5	Trachea sealing plate	3K-12-JQBBF-05	1	

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

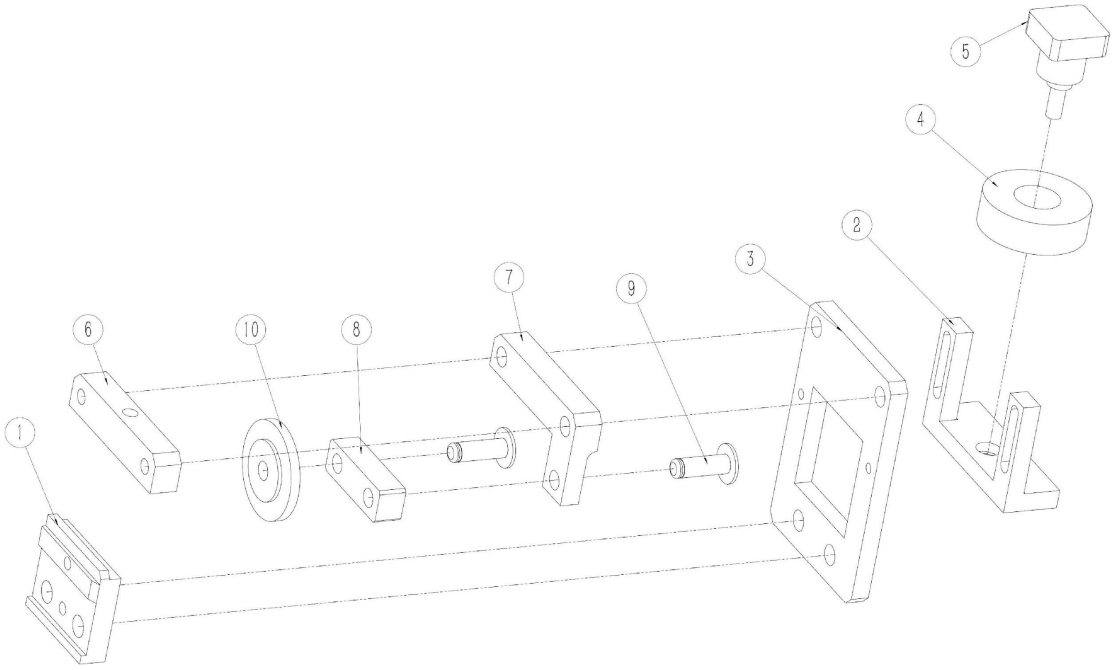


Paper-cutting Part A Material list

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	3K-12-JZ-ABF-09	1	

	cylinder connecting block1			
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

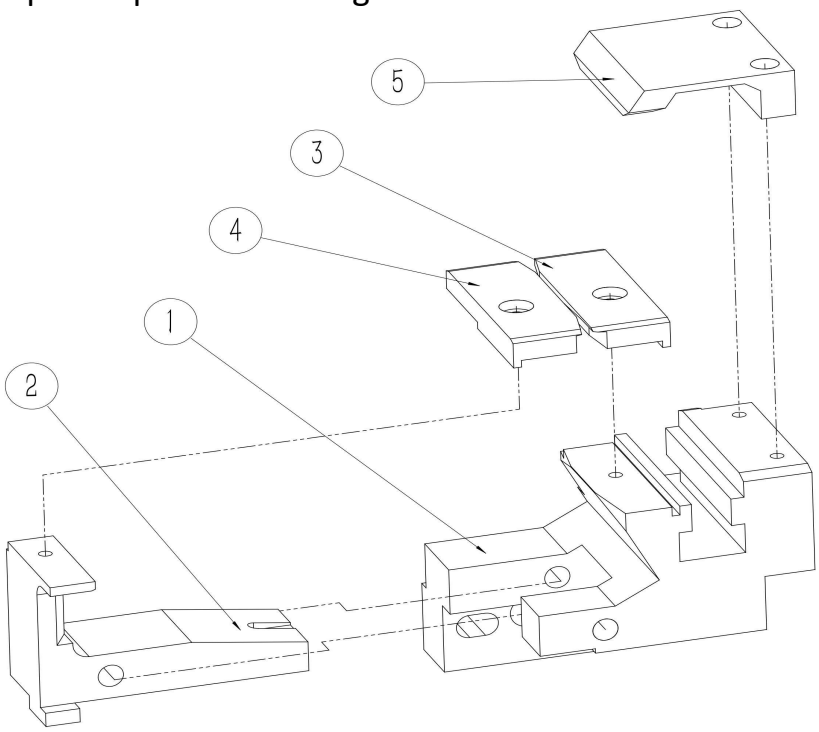


Paper-cut Part B Material List

Item Number	Part Number	Description	Quanti ty	Remarks
1	Part1-1	3K-12-JZ-BBF-01	1	
2	bearings installed version	3K-12-JZ-BBF-		
3	Bearing	3K-12-JZ-BBF-		

	fixing plate			
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	

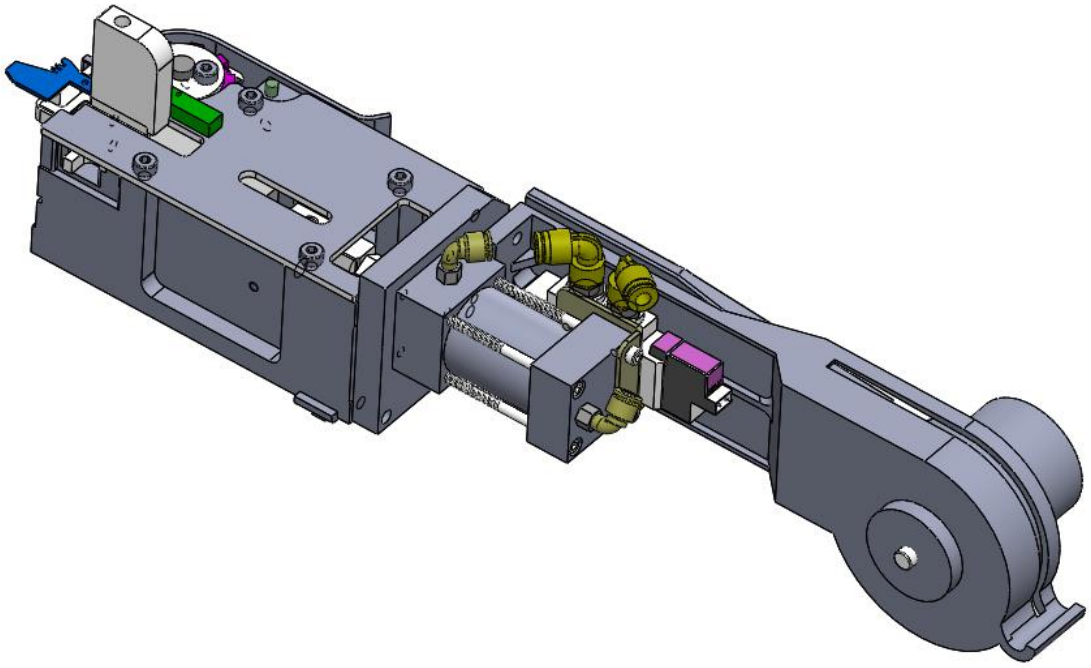
Paper-cut C part exploded drawing

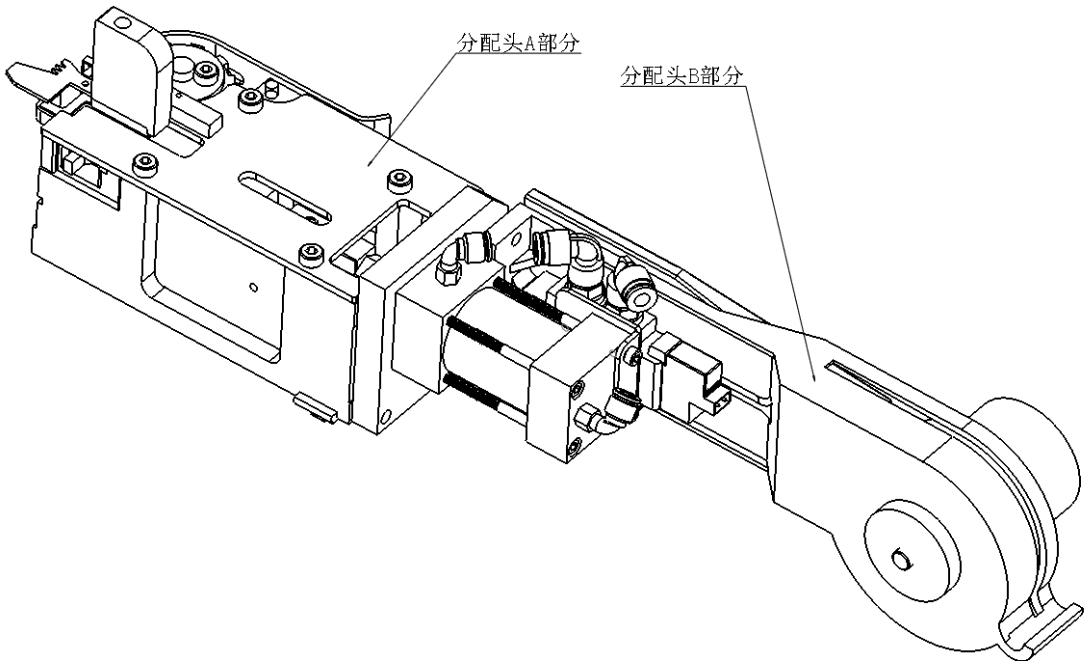


Paper-cut C material list

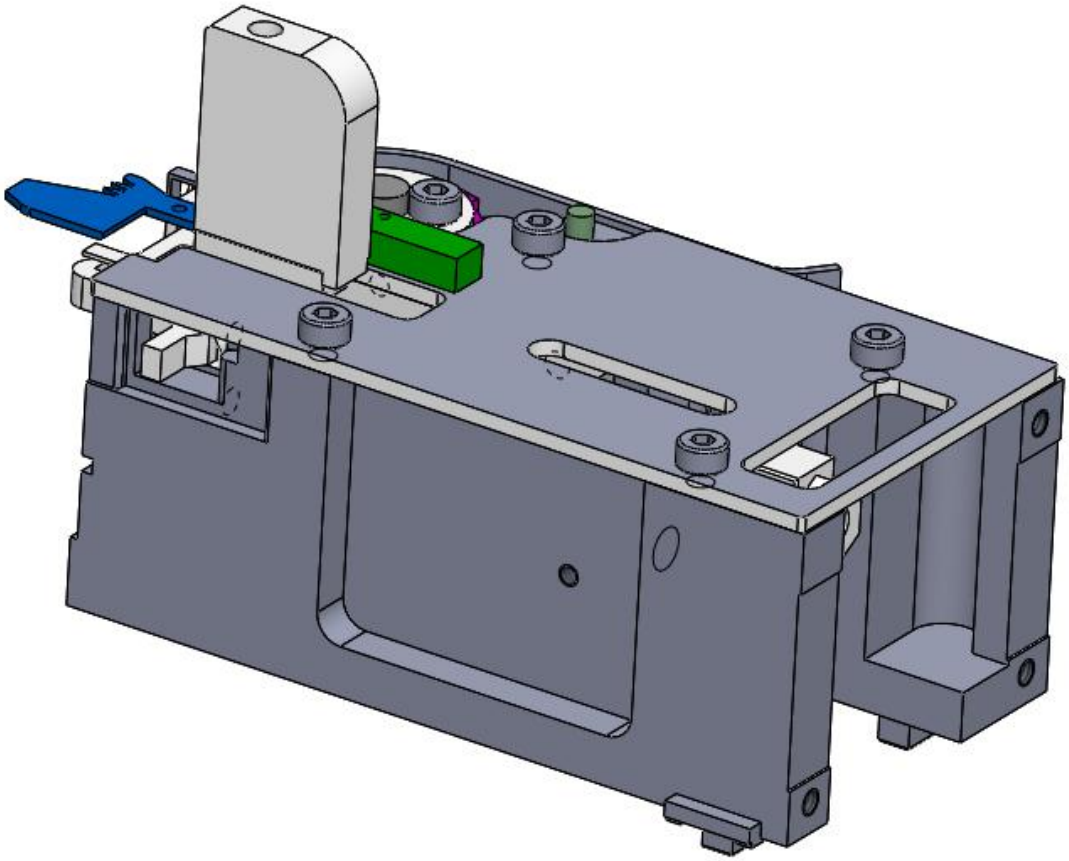
item number	part number	description	quantity	remarks
1	pull paper accessories 1	3K-12-JZ-CBF-01	1	
2	Tractor Parts	2 3K-12-JZ-CBF		
3	draw-knife	2 3K-12-JZ-CBF		
4	Paper cutter 1	3K-12-JZ-CBF-04	1	
5	Chain clamp pressure plate	3K-12-JZ-CBF-05	1	

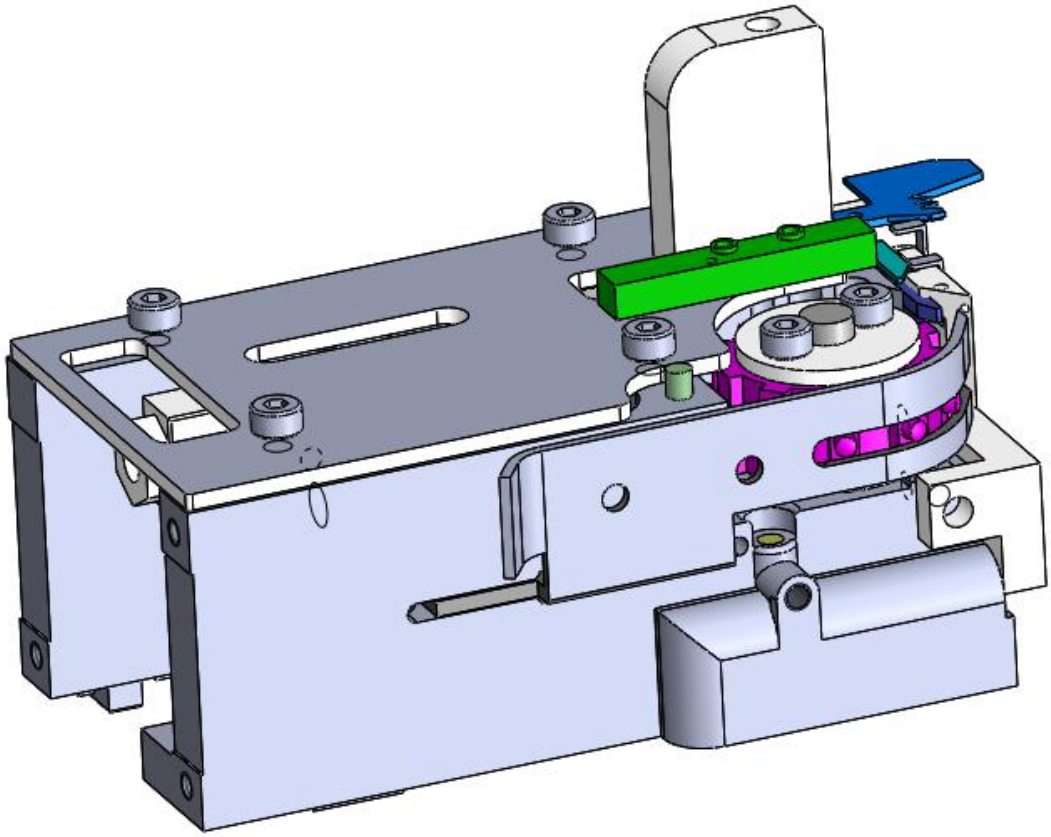
6. Distributing head assembly

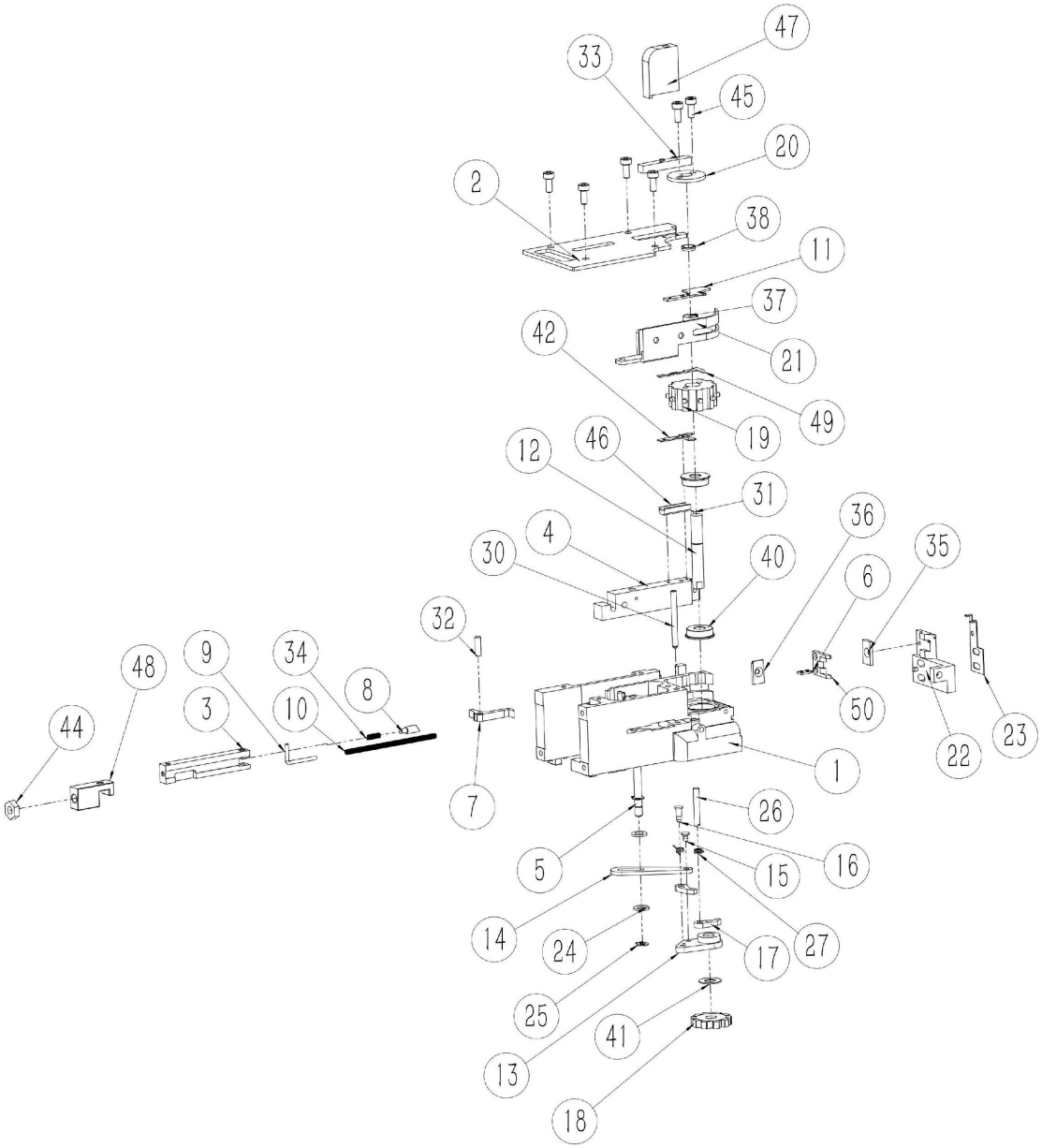




Distributing head part A exploded view







Distributing head part A material list

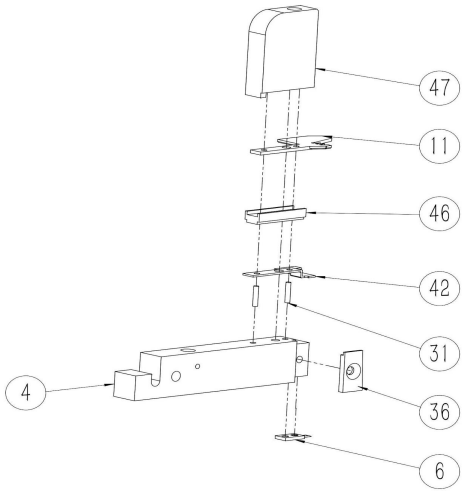
Item number	Part number	Description	Quantity	Quantity
1	Distributing head body	3K-12-FPT-ABF-01	1	
2	Sheet dispensing	3K-12-FPT-ABF-		

	head cap			
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 partsfork-typepusherExploded view and material list of the specifications of the:

10.0fork-typeExploded view of thepusher

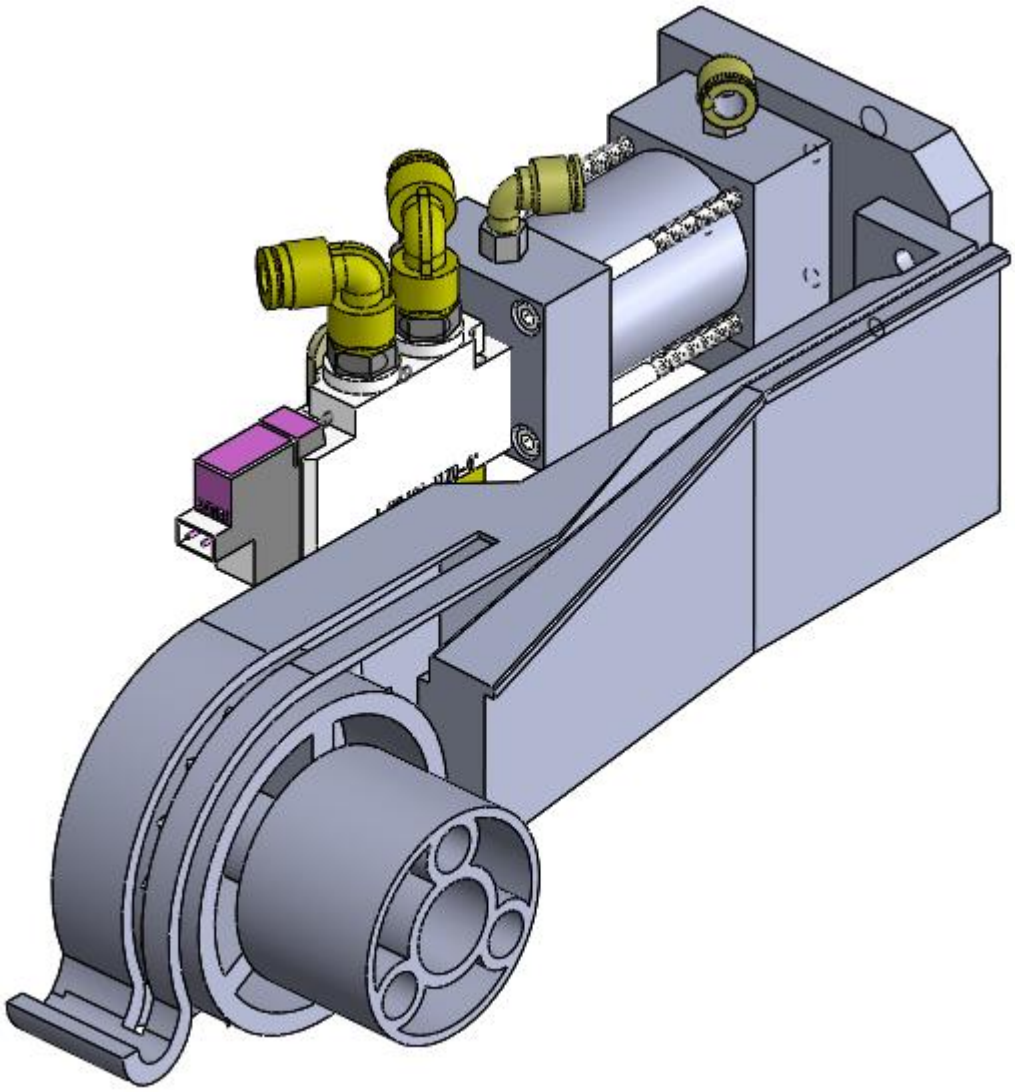


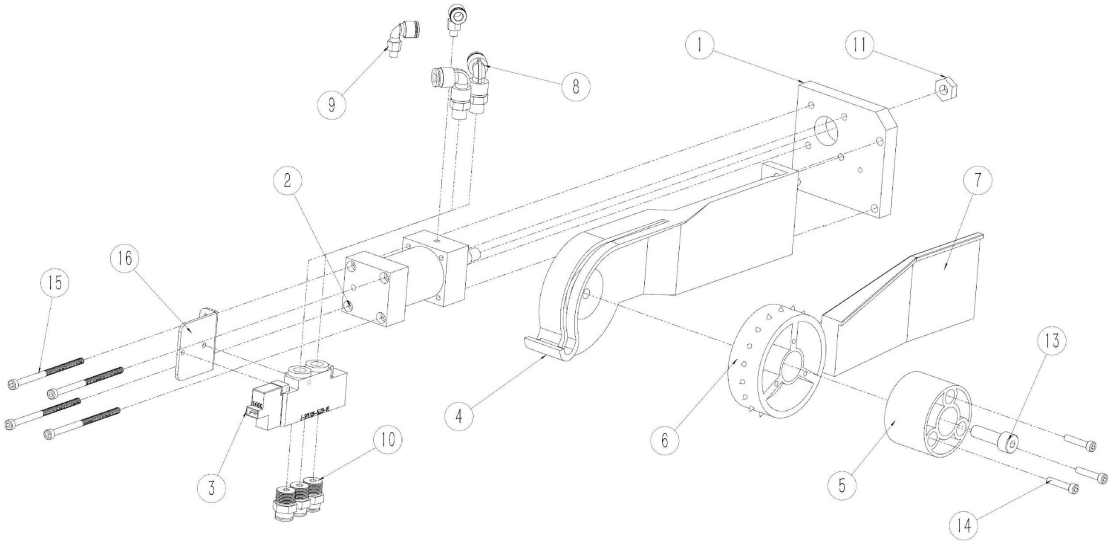
10.0Fork-

typepush piecematerial 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 seatA	3K-12-FPT-ABF-47	1	

Distributing head part B exploded view

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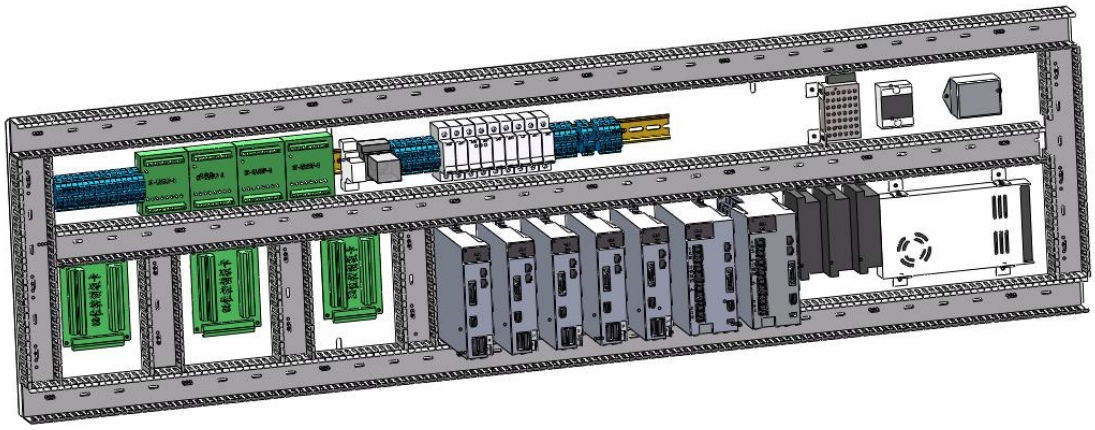
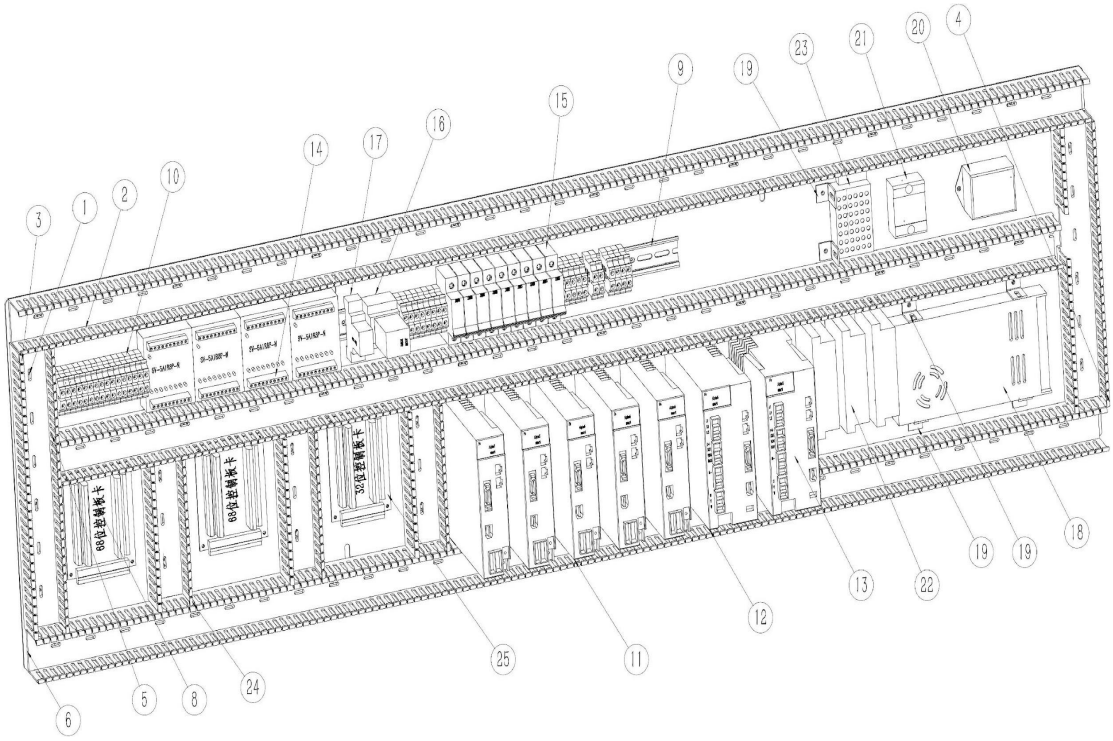
Distributing head part B material list

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

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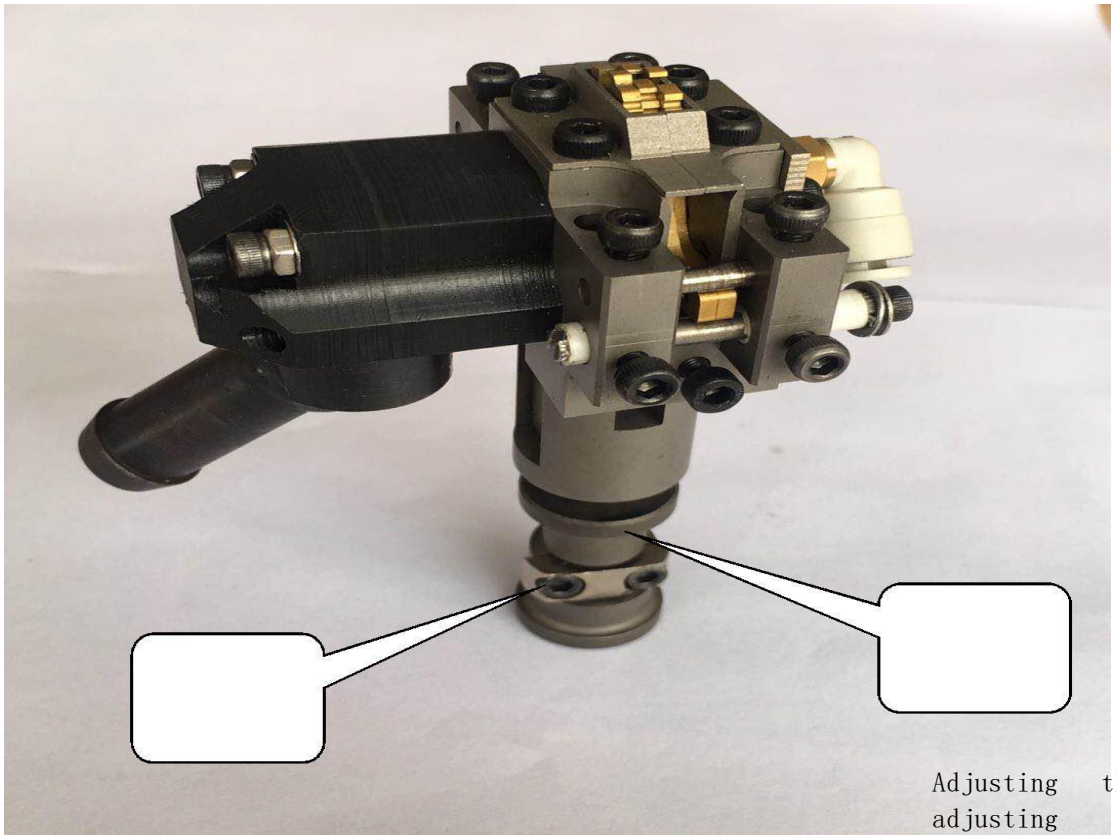
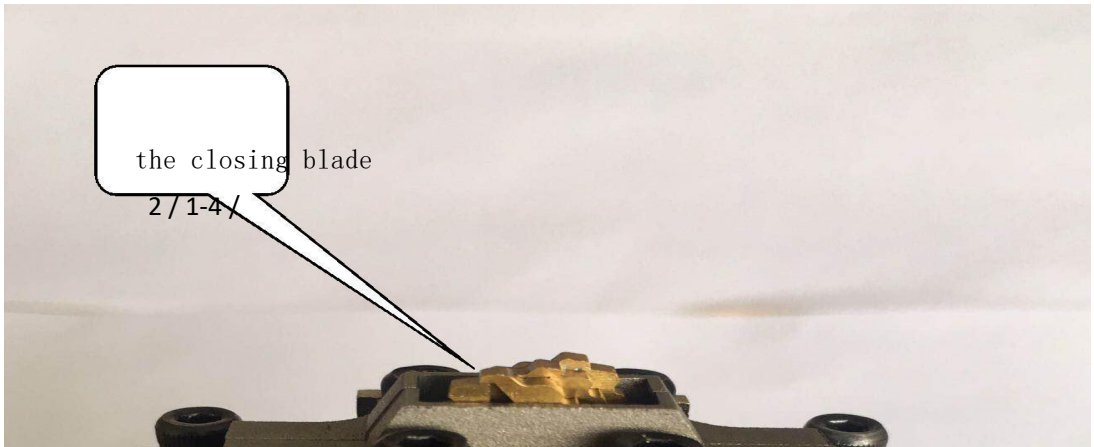
Vertical machine 12-station wiring board material list

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	

Cut toe adjustment

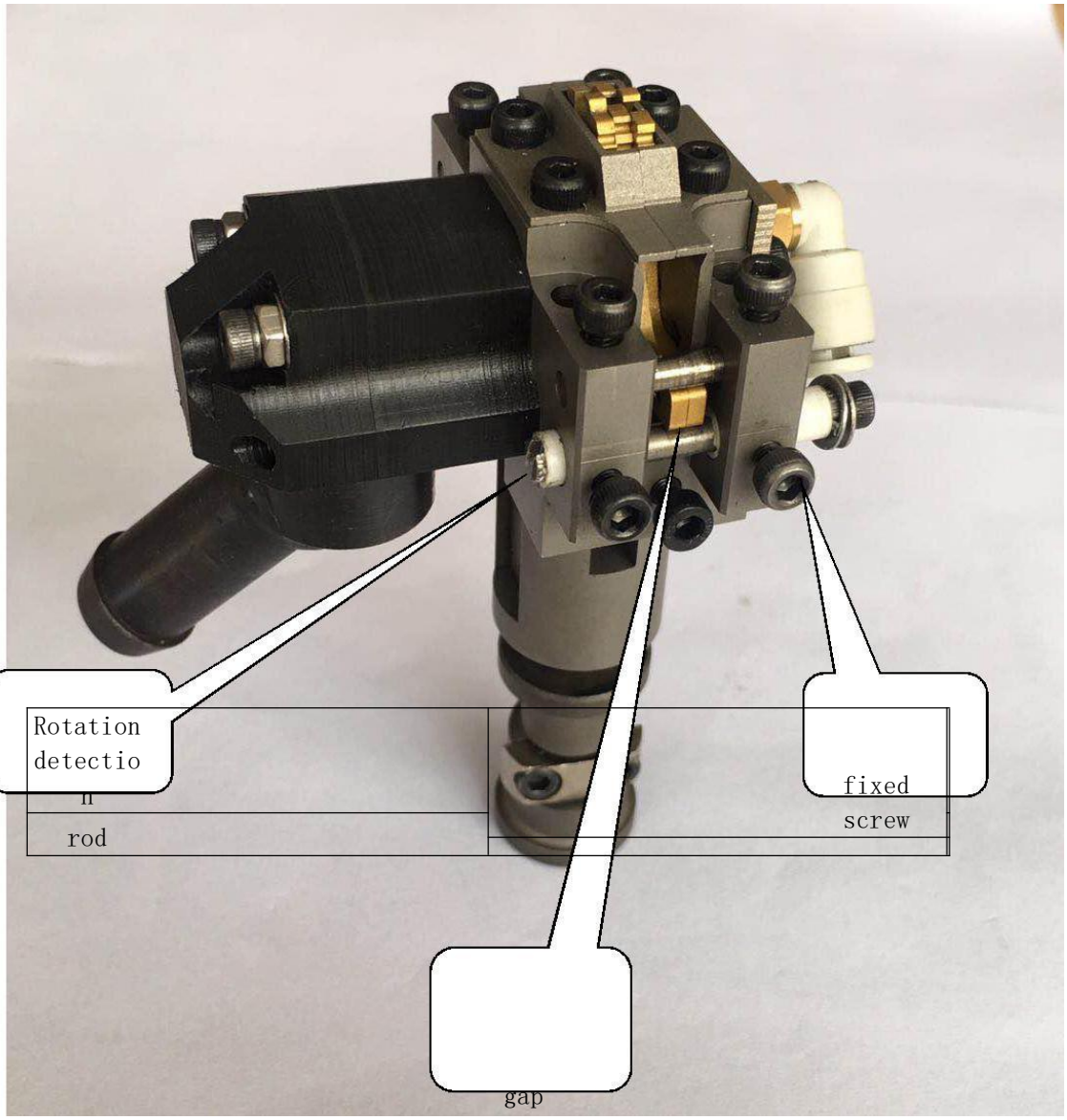
1.Loosen the fixing screw of the adjusting seat and adjust the adjusting seat so that Close the foot cutter upwards 1/2-4/5and tighten the fixing screws.





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

fixingscrew to adjustso that the eccentric pin between the fixed blade screwdriver blade contact surface of the detection rod from 0.05 0.1mmgap.



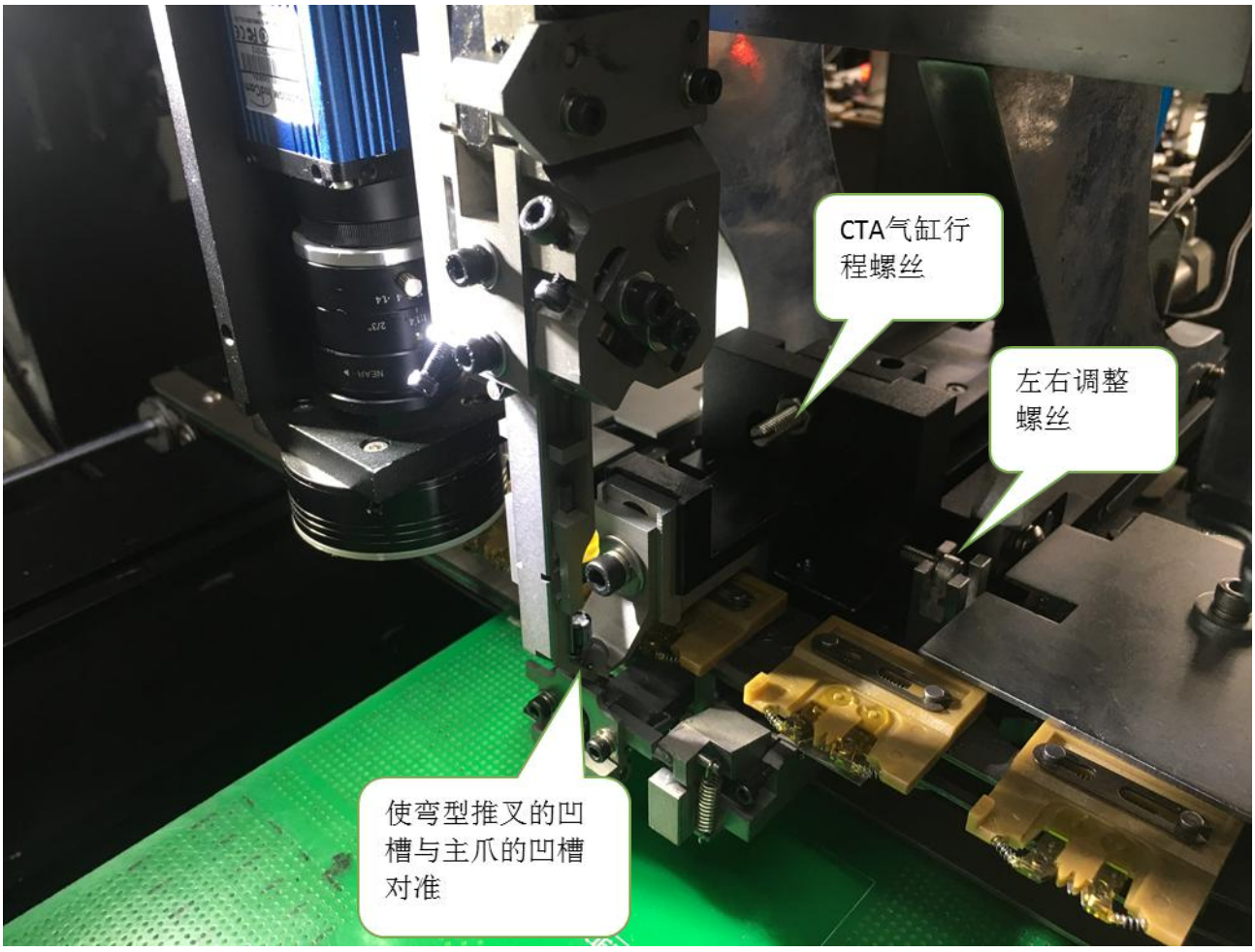
CTA adjustment

1. CTA removalRemove

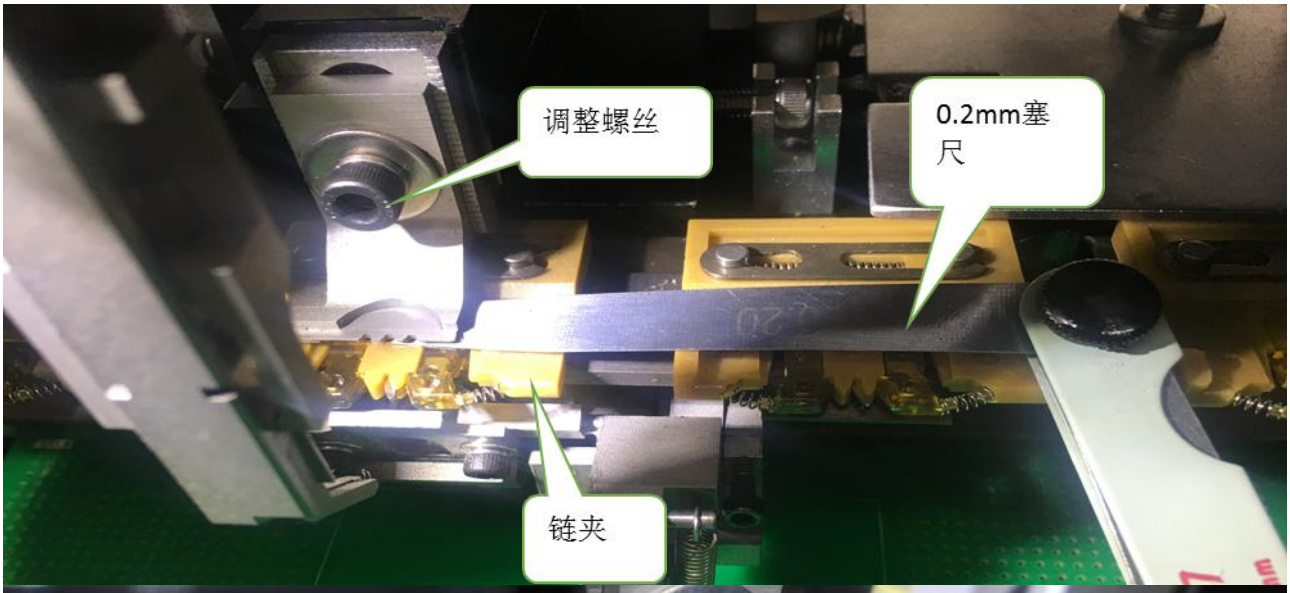
1.the L axis chain from the CTA position, remove the CTA air pipe and ph
and then remove theat the bottom of the CTA
three M6 screwsfrom the machine (The entire CTA is removed from the mach

Second, CTA position adjustment

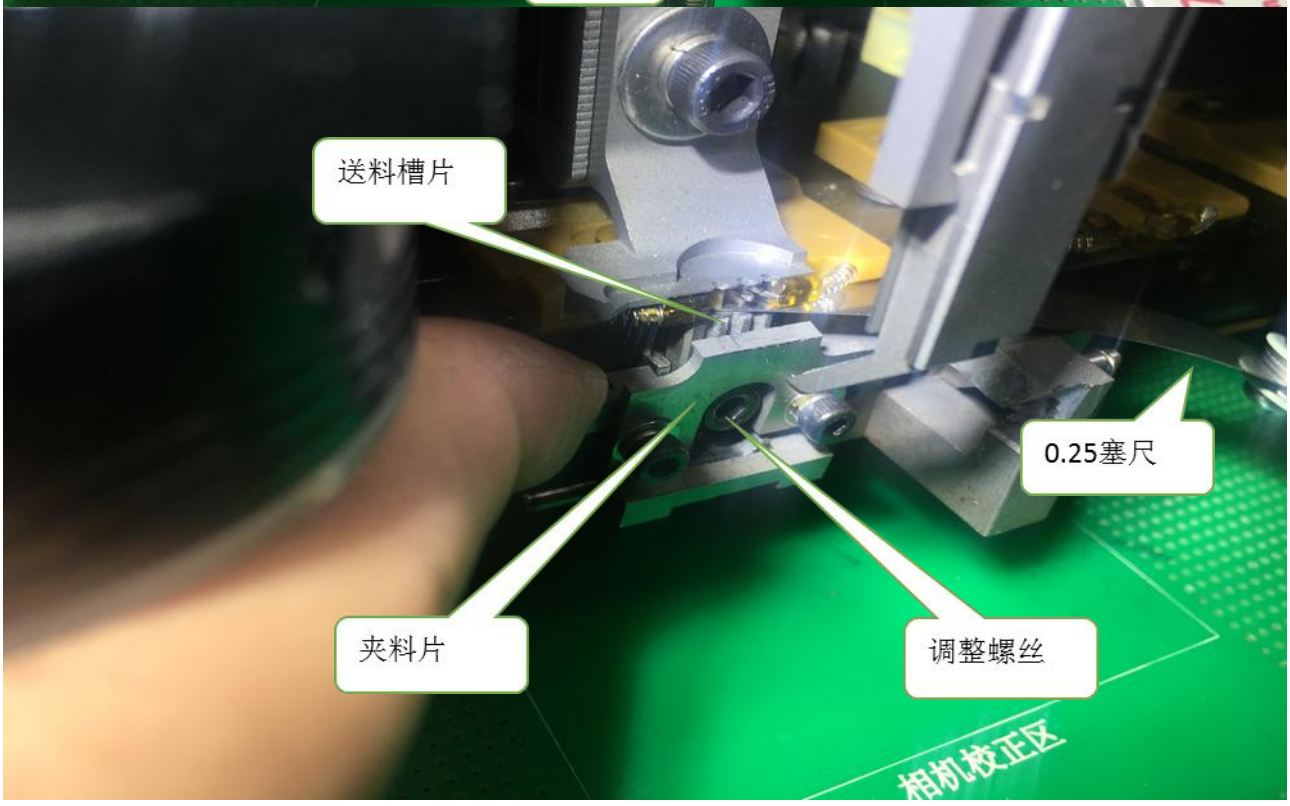
1. Slightly loosen the three M6 screws at the bottom of the left and rig
align the curved push fork groove with the groove of the main claw,
and then adjust the CTA cylinder The stroke screw is just pushed onto th
component is not deformed.



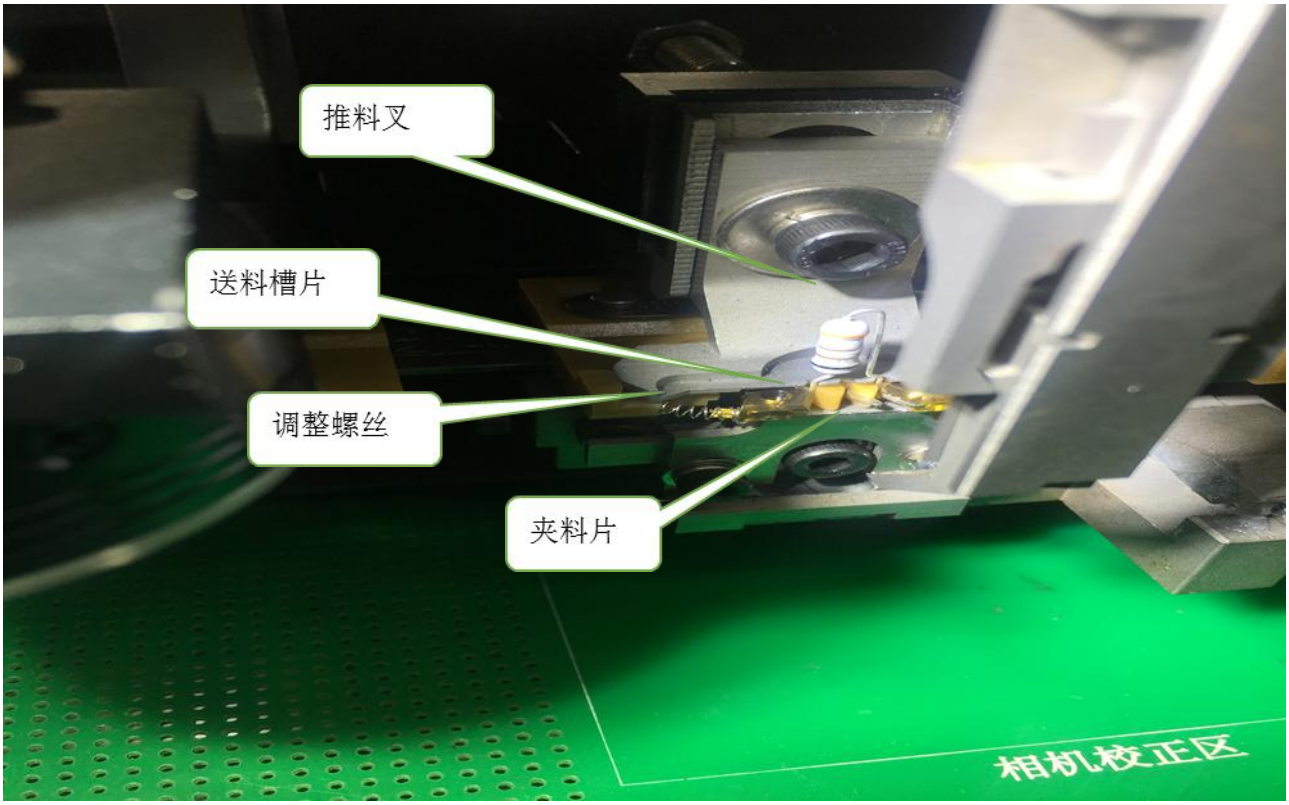
3. Loosen the curved push fork screw to adjust the surface of the curved push fork and the chain clamp to 0.2mm.



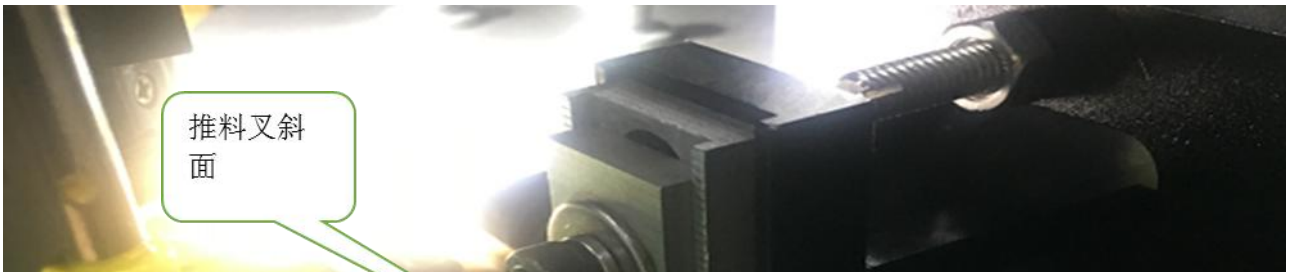
same



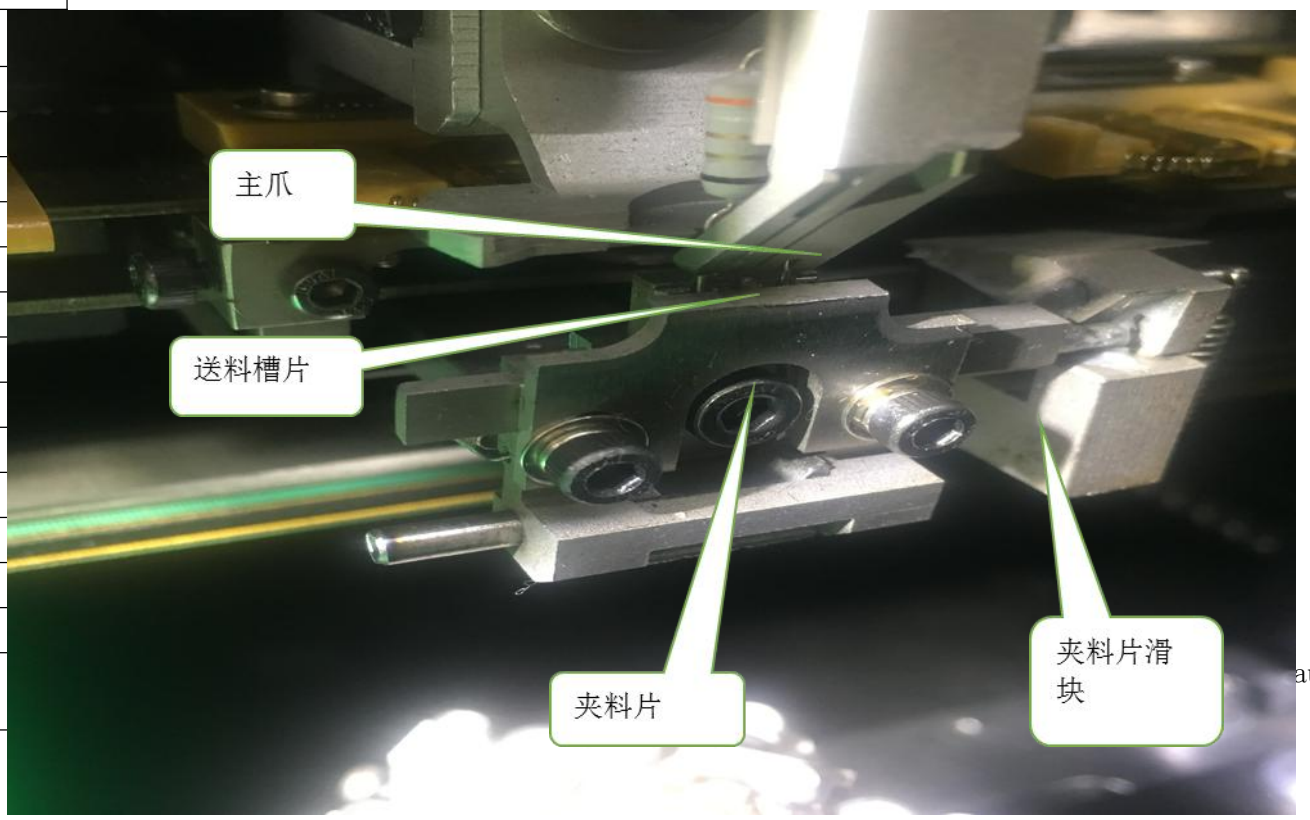
4. Adjust the screw to make When feeding, the pusher fork, the feedin material clamping piece clamp the component feet at the same time.



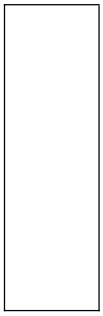
5. Adjust the pusher cylinder to return to the origin. The distance between the pusher fork slope and the chain clamp slope is 1.5mm.



6. Adjust the main jaw and the feeding slot to about 1.5mm And the pushing fo
cannot hit the main claw, then adjust the clamping piece slider to open the c
piece by 2-3mm.

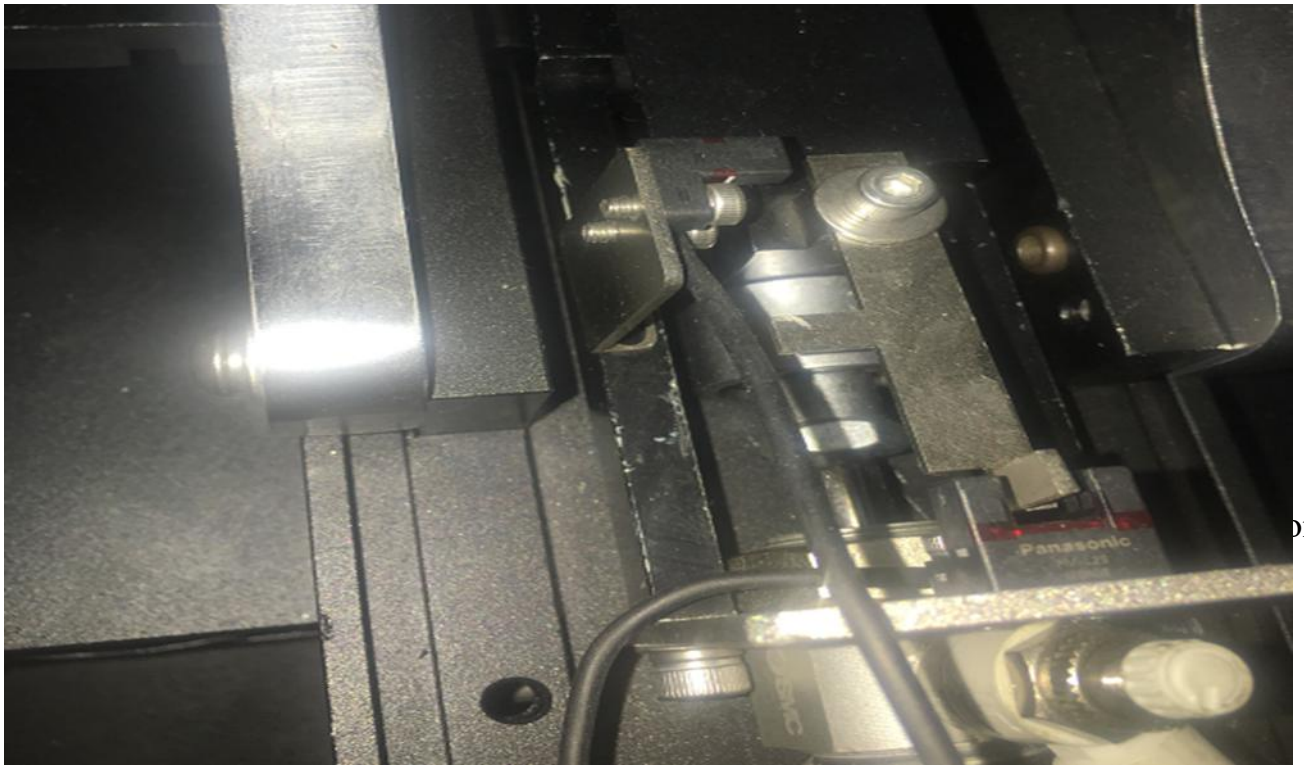


aunches



Just make sense to place sensor chip inductor (Note: Home sensor, place the sensor can n
sense in advance to)

seven or adjust the home position sensor chip can sense just right, CTA laun
1mm sensor lights, adjust theCTA
positionThe sensor seat makes the sensor plate just sense the in-position se
(note: the origin sensor and the in-position sensor cannot
be sensed in advance)



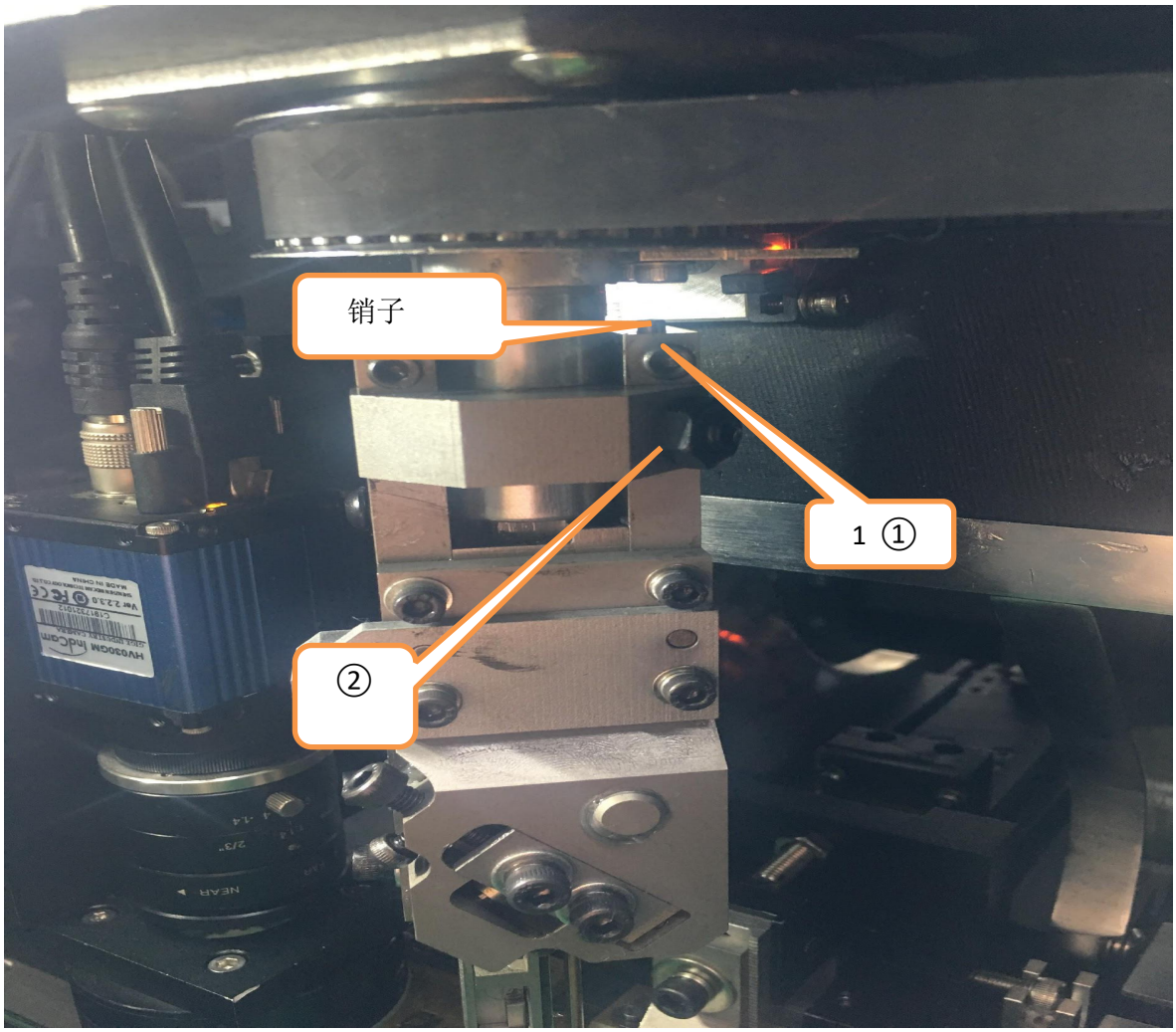
ork and the

Plug-in head adjustment

4. Plug-in head disassembly

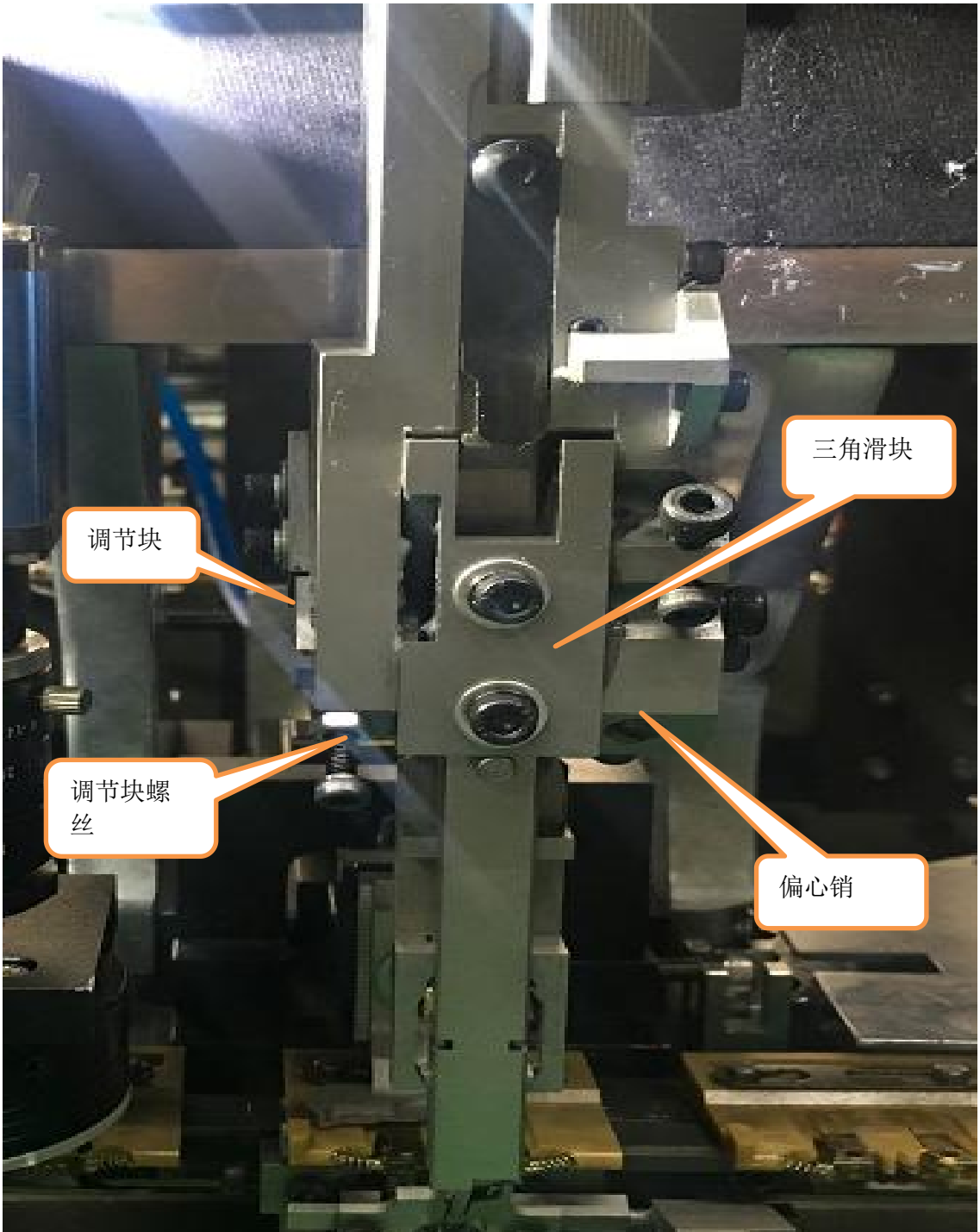
5.

3. ´ˇ∪א א ∪∂∪ˇ∩∪∇’® א§⌢´, ↓⌢⌢א∪∇ §∈∪ ´↓†∩—→∇ ∈∪⋇⊂ ∂⋇’∈→∇∪ א’ˇ∪∃ ①, §∈∪∇ ↓⌢⌢א∪∇ §∈∪ א’ˇ∪∃ ②, §∈∪∇ §⋇←∪ ⌢†§ §∈∪ ´→∇, ⋇∇⊂ §∈∪∇ §⋇←∪ →§ ⌢⊃⊃.

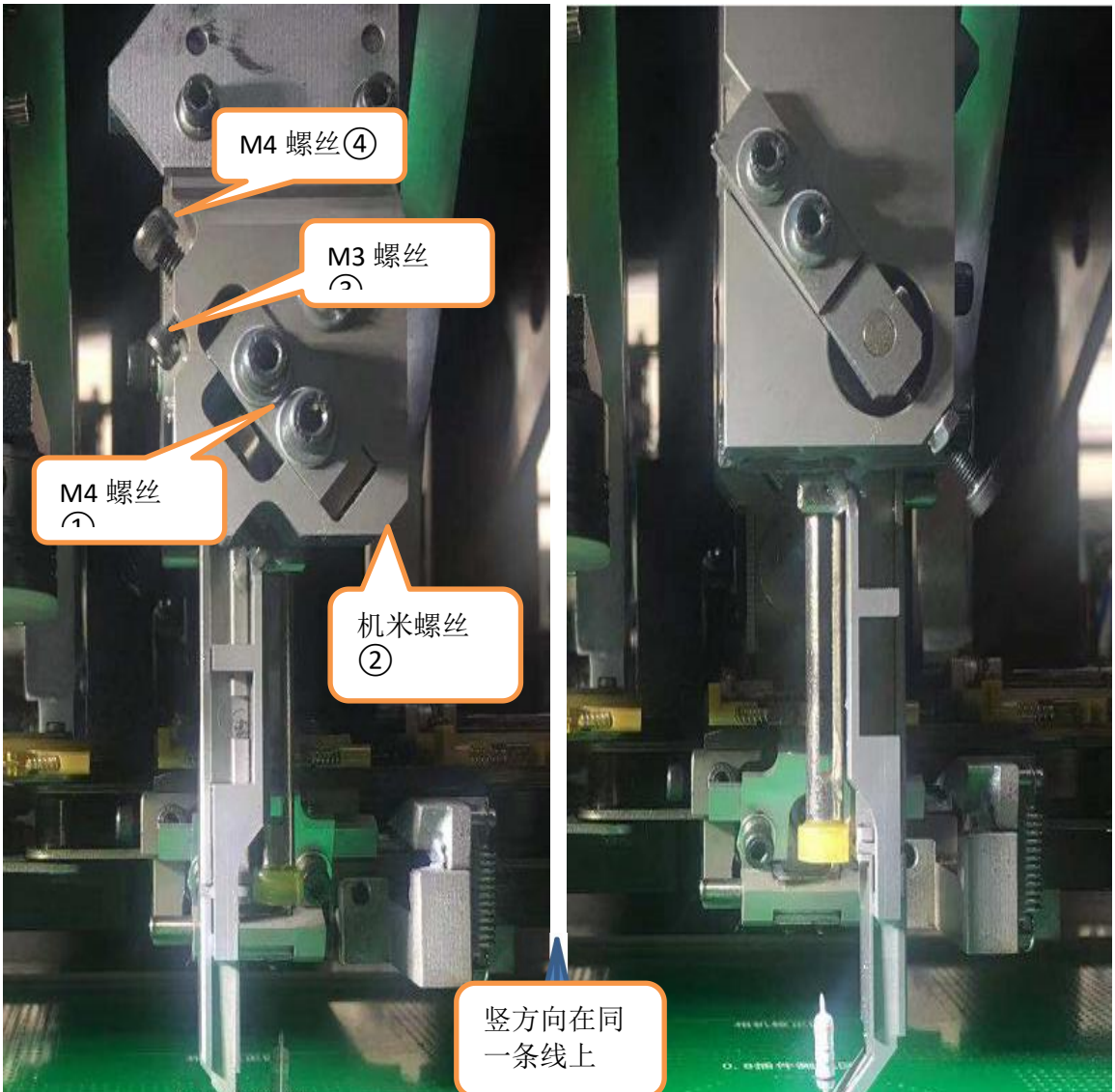


2. Adjust the tightness of the plug-in head

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.

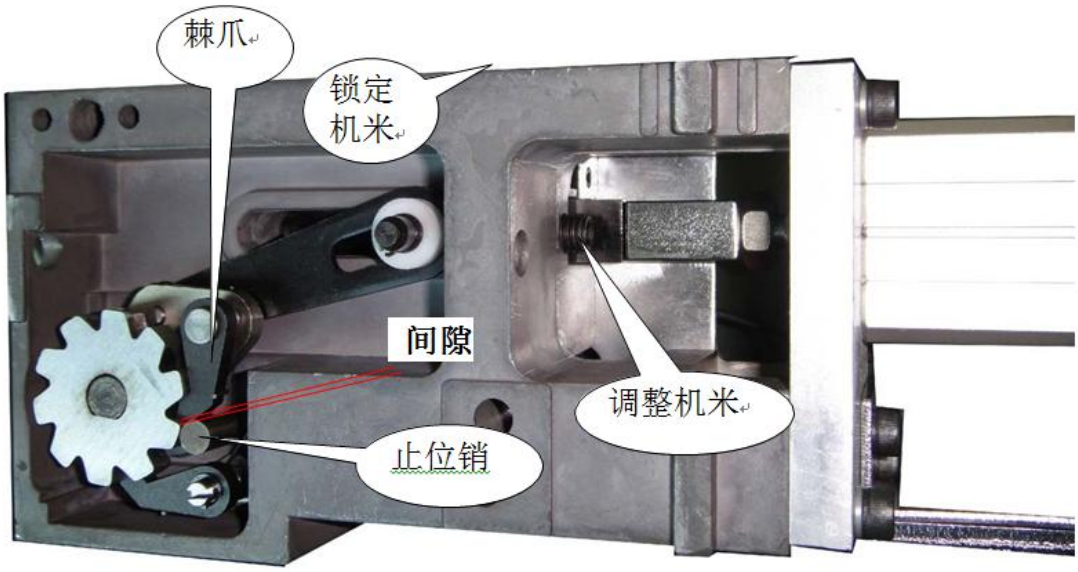


2. ∉∽∽א∪∇ §∈∪ §∃∽ ⁎4 א’˘∪∃א①, ↓∽∽א∪∇ §∈∪ ⁎3 ∂⁜’∈→∇∪ א’˘∪∃ ②, ↓∽∽א∪∇ §∈∪ ⁎3 א’˘∪∃ ③, ⁜∇⊂ §∈∪∇ ⁜⊂↑†א§ §∈∪ ⁎4 א’˘∪∃ ④ §∽ ’˘∪אא §∈∪ §˘→⁜∇∩↓∪ א↓→⊂∪˘ §∽ §∈∪ ∪∇⊂. Ω∈∪ ∃∽˘←‘∪∇’∈ →א ↓∽⁜⊂∪⊂ ∃→§∈ ⁜ ’↓⁜§∪ ♀Ω⊙ §∽ א∪∇⊂ ⁜ 5.0∂∂ ∂⁜§∪˘→⁜↓, ˘∽§⁜§∪ §∈∪ ⊕ ⁜ℒ→א 90 ⊂∪∩˘∪∪א §∽ ∂∽‡∪ §∈∪ ∃∽˘←‘∪∇’∈ א∽ §∈⁜§ §∈∪ ’∽∂’∽∇∪∇§ →א ↑†א§ →∇א∪˘§∪⊂ →∇§∽ §∈∪ ∈∽↓∪, ⁜∇⊂ §∈∪∇ ˘∽§⁜§∪ §∈∪ ⊕ ⁜ℒ→א §∽ −90 ⊂∪∩˘∪∪א, ⁜⊂↑†א§ §∈∪ ∂⁜’∈→∇∪ א’˘∪∃ ②, ⁎4 א’˘∪∃ ④ §∽ ∂⁜←∪ →§ א§˘⁜→∩∈§ Ω∪∩⁜§→‡∪ 90 ⊂∪∩˘∪∪א ⁜˘∪ ⁜↓↓ →∇ ⁜ א§˘⁜→∩∈§ ↓→∇∪ ⁜∇⊂ ’⁜∇ ‘∪ →∇א∪˘§∪⊂ →∇§∽ §∈∪ ∈∽↓∪ ⁜§ §∈∪ א⁜∂∪ §→∂∪.

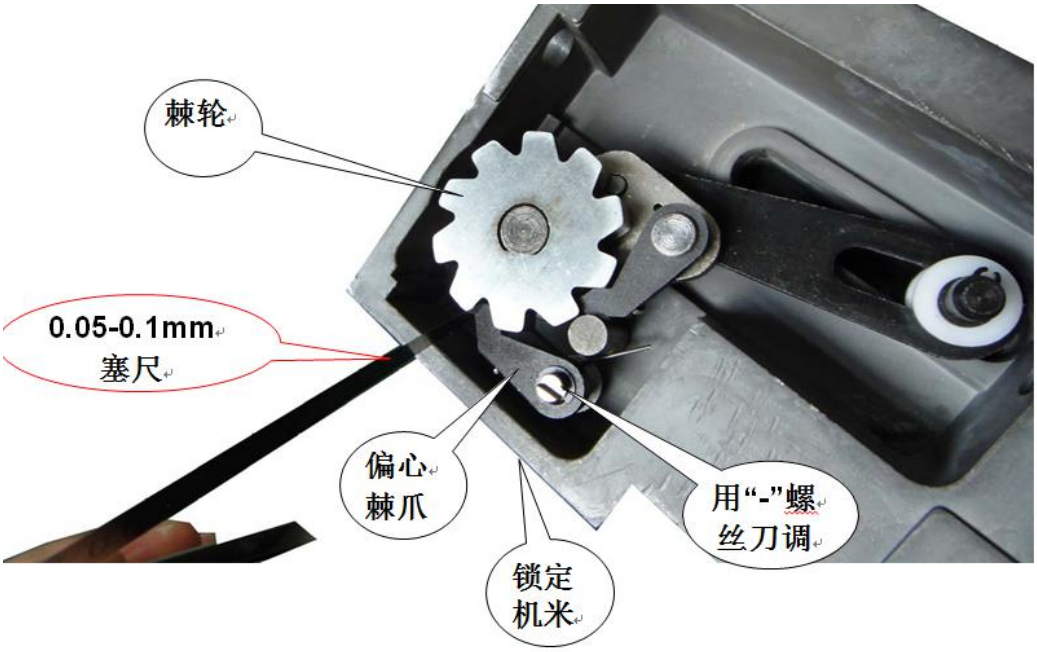


Feeder adjustment

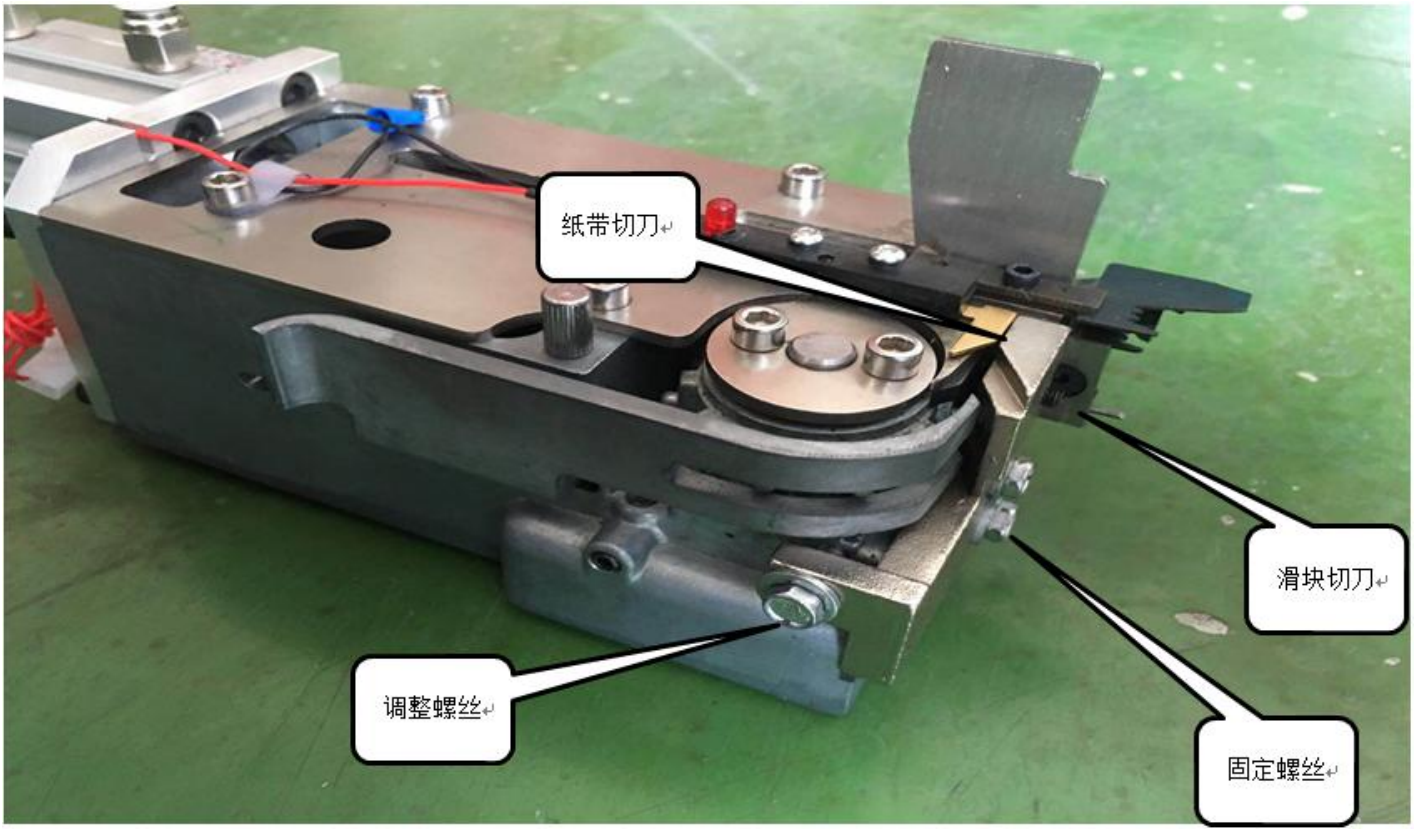
1. Thebottom of the dispensing head is upwards. When adjusting the main slider to return to the position (adjusting the machine meter 8mm), make the distance between the pawl and the stop pin 0.01-0.05mm, and lock the noodle machine. (Adjusted below)



2,using a flathead screwdriver to adjust the between the eccentricand the ratchet0.05-0.1mmgapofpawl,and the locking surface Jimi

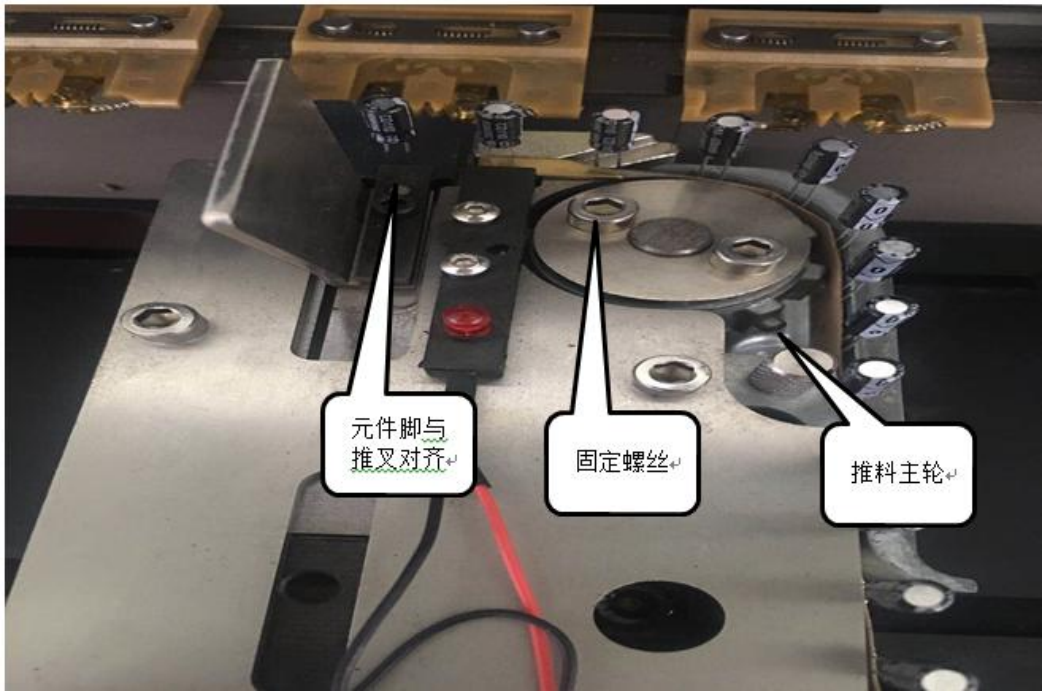


3,the main slider launched, adjustment screw to adjust the cutter and the slider The gap between the paper tape cutters is 0.038mm, and the main slider can be pushed out smoothly before and after, and then lock the fixing screws.

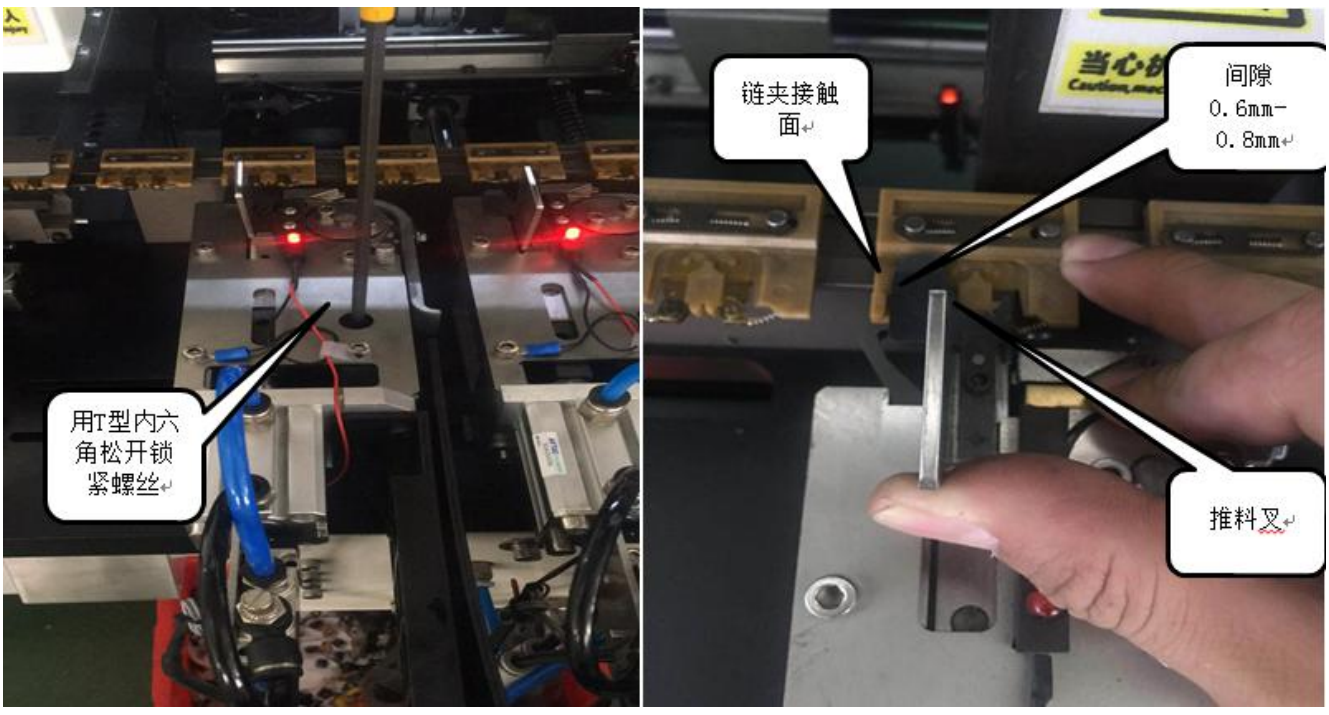


4. Loosen the two fixing screws on the main stopper wheel to make the

corresponding material feet and the station forks. Align the type push piece and lock the fixing screw (if it is 5.0mm, the left 5.0 shall prevail).



5. First return to zero to confirm that the L-axis chain is at the origin position. Loosen the feeder lock screw to make the contact surface between the push fork and the chain clamp 0.6mm-0.8mm, adjust and lock the feeder.



3. Adjust the cylinder stroke, loosen the cylinder nut, drive the solenoid valve to switch manually, so that the feeder material is just sent

to the chain clamp, and the component can move up and down manually with a little resistance and no component foot deformation.

IST-3K-12 The first board X1 interface vertical plug-in machine wiring table

pin number	original name	signal name	line code	pin number	original name	signal name	line code
1	EXGND	GND		35	PULO +	D1 pulse timing	D1M +
2	+PULO	X pulse timing	XM +	36	PULO-	D1-pulse negative	PULO-
3	D1M-	X-pulse negative	XM-	37	DIRO +	D1 direction of the positive	D1F +
4	+DIRO	X direction of the positive	+DIRO -	38	XF	negativeD1 direction	D1F-
5	DIRO-	negative X-direction	XF-	39	PULO +	D2 pulse timing	D2M +
6	+PULO	Y pulse timing	YM +	40	PULO-	D2 pulse negative	PULO-
7	D2M-	Y pulse timing	YM-	41	DIRO +	D2 direction of the positive	D2F +
8	+DIRO	Y direction	+DIRO	42	YF	D2 Direction	D2F1

		of the positive	-			negative	
9	DIRO-	Y direction negative	YF-	43	OUT 1	Left lift table cylinder	X101
10	ELO+	X limit signal positive	X+	44	OUT 2	Left lift table belt motor	X102
11	ELO-	X limit signal negative	X-	45	OUT 3	right Lifting table cylinder	X103
12	SDO+	X deceleration signal positive		46	OUT 4	Right elevator belt motor	X104
13	SDO-	X deceleration signal negative		47	OUT 5	Send board	X105
14	ORGO	X origin signal	XO	48	OUT 6	PCB positioning cylinder	X106
15	ELO+	Y limit signal positive	Y+	49	OUT 7	Work lamp	X107
16	ELO-	Y limit signal negative	Y-	50	OUT 8	Shear foot	X108
17	SDO+	Y deceleration signal positive		51	OUT 9	Shear foot	X109
18	SDO-	Y deceleration signal negative		52	OUT 10	PCB limit cylinder	X1010
19	ORGO	Y origin signal	YO	53	OUT 11	Table belt motor	X1011
20	ELO+			54	OUT 12	camera light	X1012
21	ELO-			55	IN 5	Left lift table cylinder original position	X1IN5
22	SDO+			56	IN 6	Left lift table cylinder in place	X1IN6
23	SDO-			57	IN 7	Right lift table cylinder original position	X1IN7

24	ORGO	D1 Origin	D10	58	IN 8	Right lift table cylinder in position	X1IN8
25	ELO+	D2 ELZ		59	IN 9	Receive the next paragraph and request to send the board	X1IN9
26	ELO-	D2 ELF		60	IN 10	Open	X1IN10
27	SDO+			61	IN 11	Stop	X1IN11
28	SDO-			62	IN 12	Head	X1IN12
29	ORGO	D2 Origin		63	IN 13	Manual cut foot	X1IN13
30	IN 1	Left lift PCB1	X1IN1	64	IN 14	Emergency stop	X1IN14
31	IN 2	Right lift pcb1	X1IN2	65	IN 15		
32	IN 3	Left lift table PCB2	X1IN3	66	EXGND	GND	
33	IN 4	Right lifting platform pcb2	X1IN4	67	E24	24V VCC	
34	EXGND	GND		68	IN 16	safety door	X1IN16

IST-3K-12 second board X1 interface vertical plug-in machine wiring table

pin number	original name	signal name	wire code	pin number	original name	signal name	wire code
1	EXGND	GND		35	PULO+	L pulse positive	LM+
2	PULO+	H pulse positive	XM+	36	PULO-	L pulse negative	LM-
3	PULO-	H pulse negative	XM-	37	DIRO+	L direction positive	LF+
4	DIRO+	H direction positive	XF+	38	DIRO-	L direction negative	LF-
5	DIRO -	negative directionH	XF-	39	PULO +		
6	PULO+	P pulse positive	YM+	40	PULO-		
7	PULO-	P pulse negative	YM-	41	DIRO+		
8	DIRO+	P direction is positive	YF+	42	DIRO-		

9	DIRO-	P direction negative	YF-	43	OUT 1	No. 1 feeder	X201
10	ELO+	H limit signal positive	X+	44	OUT	2 No. 2 feeder	X202
11	ELO-	H limit signal negative	X-	45	OUT	3 No. 3 feeder	X203
12	SDO+			46	OUT 4	No. 4 feeder	X204
13	SDO-			47	OUT 5	No. 5 feeder	X205
14	ORGO	H origin signal	HO	48	OUT 6	No. 6 feeder	X206
15	ELO+	P limit signal positive	Z+	49	OUT	7 No. 7 feeder	X207
16	ELO-	P limit signal negative	Z-	50	OUT 8	8 feeder	X208
17	SDO+			51	OUT 9	No. 9 feeder	X209
18	SDO-			52	OUT 10	No. 10 feeder	X2010
19	ORGO	P Origin signal	ZO	53	OUT 11	Positive cutter	X2011
20	ELO+			54	OUT 12	CTA pusher cylinder	X2012
21	ELO-			55	IN 5	Feeder return detection	X2IN5
22	SDO+			56	IN 6	There is material detection R	X2IN6
23	SDO-			57	IN 7	with material detection L	X2IN7
24	ORGO	L origin	LO	58	IN 8	CTA in place	X2IN8
25	ELO+			59	IN 9	CTA in situ	X2IN9
26	ELO-			60	IN 10	Cut the foot in place	X2IN10
27	SDO+			61	IN 11	Scissor foot lower position	X2IN11
28	SDO-			62	IN 12		
29	ORGO			63	IN 13		
30	IN 1	PCB in place	X2IN1	64	IN 14		
31	IN 2	PCB positioning successful	X2IN2	65	IN 15		
32	IN 3			66	EXGND	GND	
33	IN 4			67	E24	24V VCC	

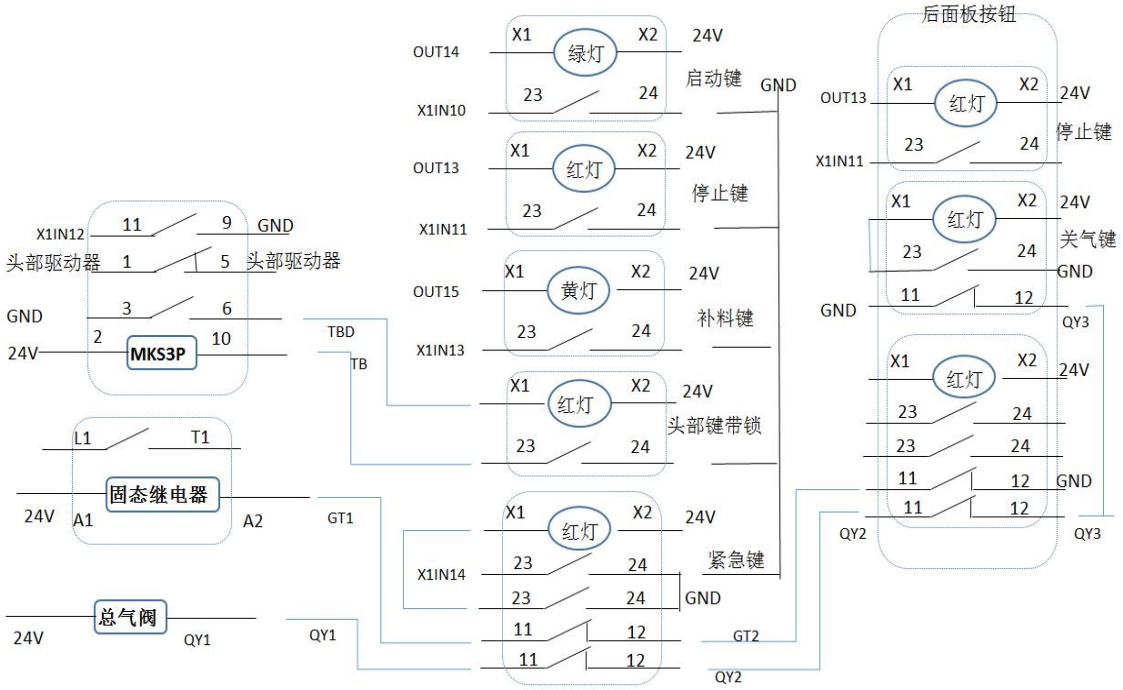
34	EXGND	GND		68	IN 16		

3K-12 first board J1 interface vertical plug-in machine wiring table

pin number	original name	signal name	line code	pin number	original name	signal name	line code
1	IN17	No. 1 feeding station has material sensor	J1IN1	20	GND		
2	IN18	No. 2 feeding station has material sensor	J1IN2	21	OUT13	Red light	J101
3	IN19	No. 3 feeding station has material sensor	J1IN3	22	OUT14	Green light	J102
4	IN20	No. 4 feeding station has material sensor	J1IN4	23	OUT15	Yellow light	J103
5	IN21	5 No. Feeding Station with or without material sensing	J1IN5	24	OUT16	buzzer	J104
6	IN22	No. 6 Feeding Station with/without sensing	J1IN6	25	OUT17	Cylinder before paper cutting	J105
7	IN23	No. 7 Feeding Station with/without sensing	J1IN7	26	OUT18	Plug-in head position indicator light	J106
8	IN24	No. 8 feeding station has material sensor	J1IN8	27	OUT19 Material	receiving reminder	J107
9	IN25	No. 9 feeding station has material sensor	J1IN9	28	OUT20	Feeder abnormal reminder	J108
10	IN26	No. 10 feeding station has material sensor	J1IN10	29	OUT21		J109
11	IN27	No. 11 feeding station has material sensing		30	OUT22		J1010
12	IN28	No. 12 feeding station has material sensing		31	OUT23		J1011
13	IN29			32	OUT24		J1012
14	IN30			33	OUT25		J1013
15	IN31			34	OUT26	No. 11 feeder	J1014
16	IN32			35	OUT27	No. 12 feeder	J1015
17	3.3V			36			
18	3.3V			37	GND		
19	GND						

SOUTHERN MACHINERY

按钮接线图



IST-3K-20 vertical plug-in machine wiring table first board X1 interface

pin number	original name	signal name	line code	pin number	original name	signal name	line code
1	EXGND	GND		35	PULO+	steering D1 axis pulse positive	D1P+
2	PULO+	platform X pulse positive	XP+	36	PULO-	steering D1 axis pulse positive	D1P-
3	PULO-	platform X pulse negative	XP-	37	DIRO+	steering D1 axis direction positive	D1F+
4	DIRO+	platform X direction positive	XF+	38	DIRO-	steering D1 axis direction negative	D1F-
5	DIRO-	platform X direction negative	XF-	39	PULO+	steering D2 axis pulse positive	D2P+
6	PULO+	platform Y pulse positive	YP+	40	PULO-	steering D2 axis pulse	D2P-

						positive	
7	PULO-	platform Y pulse positive	YP-	41	DIRO+	steering D2 axis direction positive	D2F+
8	DIRO+	platform Y direction positive	YF+	42	DIRO-	steering D2 axis direction negative	D2F-
9	DIRO-	platform Y direction negative	YF-	43	OUT 1	CTA pusher cylinder	X101
10	ELO+	platform X limit Positive signal	XEL+	44	OUT 2	Shearing foot	X102
11	ELO-	Platform X limit signal negative	XEL-	45	OUT 3	Shearing foot	X103
12	SDO+			46	OUT 4	Buzzer	X104
13	SDO-			47	OUT 5		
14	ORGO	platform X origin signal	XORG	48	OUT 6		
15	ELO+	platform Y limit signal positive	YEL+	49	OUT 7		
16	ELO-	Platform Y limit signal negative	YEL-	50	OUT 8	Camera switch light	X108
17	SDO+			51	OUT 9	Red light	X109
18	SDO-			52	OUT 10	yellow light	X1010
19	ORGO	platform Y origin signal	YORG	53	OUT 11	green light	X1011
20	ELO+	steering D1 axis limit signal positive	D1EL+	54	OUT 12	work desk lamp	X1012
21	ELO-	steering D1 axis limit signal negative	D1EL-	55	IN 5		
22	SDO+			56	IN 6	Scissor foot cylinder in place	X1IN6
23	SDO-			57	IN 7		
24	ORGO	D1 axis origin signal	RotationD1ORG	58	IN 8	Plug-in axis return	X1IN8
25	ELO+ Rotation	D2 axis limit signal positive	D2EL+	59	IN 9		
26	ELO- Direction	to D2 axis limit signal negative	D2EL-	60	IN 10	Start	X1IN10
27	SDO+			61	IN 11	stop production	X1IN11

						(stop)	
28	SDO-			62	IN 12	Emergency stop (emergency stop)	X1IN12
29	ORGO	steering D2 axis origin signal	D2ORG	63	IN 13	CTA pusher cylinder in position	X1IN13
30	IN 1	picking left	X1IN1	64	IN 14	CTA pusher cylinder home position	X1IN14
31	IN 2	picking right	X1IN2	65	IN 15	Manual cut foot signal	X1IN15
32	IN 3	Cut foot seat low position	X1IN3	66	EXGND	GND	
33	IN 4			67	E24	24V VCC	
34	EXGND	GND		68	IN 16	safety door	X1IN16

IST-3K-20 vertical plug-in machine wiring table second board X1 interface

pin number	original name	signal name	wire code	pin number	original name	signal name	wire code
01	EXGND	GND		35	PULO+	chain L-axis pulse positive	LP+
02	PULO+	plug-in H-axis pulse positive	HP+	36	PULO-	chain L-axis pulse negative	LP-
03	PULO	-plug-in H-axis pulse negative	HP-	37	DIRO+	chain L-axis direction positive	LF+
04	DIRO+	plug-in H-axis direction Positive	HF+	38	DIRO-	chain L-axis direction negative	LF-
05	DIRO	-plug-in H-axis direction negative	HF-	39	PULO+		
06	PULO+	P-axis pulse positive	PP+	40	PULO-		
07	PULO-	Pressing material P axis pulse	PP-	41	DIRO+		

		positive					
08	DIRO+	Pressing material P axis direction is positive	PF+	42	DIRO-		
09	DIRO-	Pressing material P-axis direction negative	PF-	43	OUT 1	Workbench belt	X201
10	ELO+	plug-in H-axis limit signal positive	HEL+	44	OUT 2	Left lift table belt	X202
11	ELO	-plug-in H-axis limit signal negative	HEL-	45	OUT 3	Right elevator belt	X203
12	SDO+			46	OUT 4	Left lift table cylinder	X204
13	SDO-			47	OUT 5	Right lift table cylinder	X205
14	ORGO	plug-in H-axis origin signal	HORG	48	OUT 6	PCB positioning 1	X206
15	ELO+	Pressing material P-axis limit signal positive	PEL+	49	OUT 7 To	the previous stage requesting board	X207
16	ELO-	Pressing material P Axis limit signal negative	PEL-	50	OUT 8	PCB positioning 2	X208
17	SDO+			51	OUT 9		
18	SDO-			52	OUT 10		
19	ORGO	P-axis origin signal of pressing material	PORG	53	OUT 11		
20	ELO+	chain L axis limit signal positive	LEL+	54	OUT 12		
21	ELO-	chain L axis limit signal negative	LEL-	55	IN 5	PCB in place	X2IN5
22	SDO+			56	IN 6	PCB positioning	X2IN6
23	SDO-			57	IN 7	Left elevating table left section pcb	X2IN7
24	ORGO	Chain L axis origin signal	LORG	58	IN 8	Right elevating table left section pcb	X2IN8
25	ELO+			59	IN 9	Left lift platform, right section pcb	X2IN9

26	EL0-			60	IN 10	Right lifting platform right section pcb	X2IN10
27	SD0+			61	IN 11	Left lift table original position	X2IN11
28	SD0-			62	IN 12	Left lift table in place	X2IN12
29	ORG0			63	IN 13	Right lift table original position	X2IN13
30	IN 1			64	IN 14	Right elevator in place	X2 IN14
31	IN 2			65	IN 15	Receive the board sending demand of the next stage	X2IN15
32	IN 3			66	EXGND	GND	
33	IN 4			67	E24	24V VCC	
34	EXGND	GND		68	IN 16		

IST-3K-20 vertical plug-in machine wiring table first board J1 interface

pin number	origina l name	signal name	line code	pin number	original name	signal name	line code
1	IN17	material station 1	J1IN1	20	GND		
2	IN18	material station 2	J1IN2	21	OUT13	material station 1	J101
3	IN19	material station 3	J1IN3	22	OUT14	material station 2	J102
4	IN20	material station 4	J1IN4	23	OUT15	material station 3	J103
5	IN21	material station 5	J1IN5	24	OUT16	material station 4	J104
6	IN22	Material station 6	J1IN6	25	OUT17	material station 5	J105
7	IN23	material station 7	J1IN7	26	OUT18	material station 6	J106
8	IN24	material station 8	J1IN8	27	OUT19	material station 7	J107
9	IN25	material station 9	J1IN9	28	OUT20	material station 8	J108
10	IN26	material station	J1IN10	29	OUT21	material station 9	J109

		10					
11	IN27	material station 11	J1IN11	30	OUT22	material station 10	J1010
12	IN28	material station 12	J1IN12	31	OUT23	material station 11	J1011
13	IN29	material station 13	J1IN13	32	OUT24	material station 12	J1012
14	IN30	material station 14	J1IN14	33	OUT25	material station 13	J1013
15	IN31	material station 15	J1IN15	34	OUT26	material station 14	J1014
16	IN32			35	OUT27	Material station 15	J1015
17	3.3V			36			
18	3.3V			37	GND		
19	GND			38			

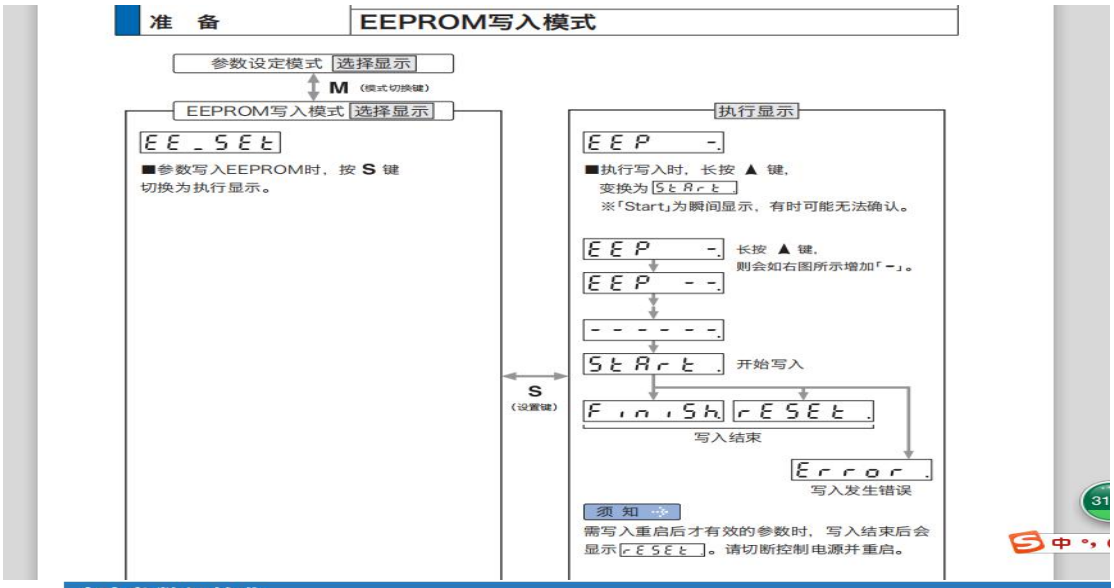
IST-3K-20 vertical plug-in machine wiring table second board J1 interface

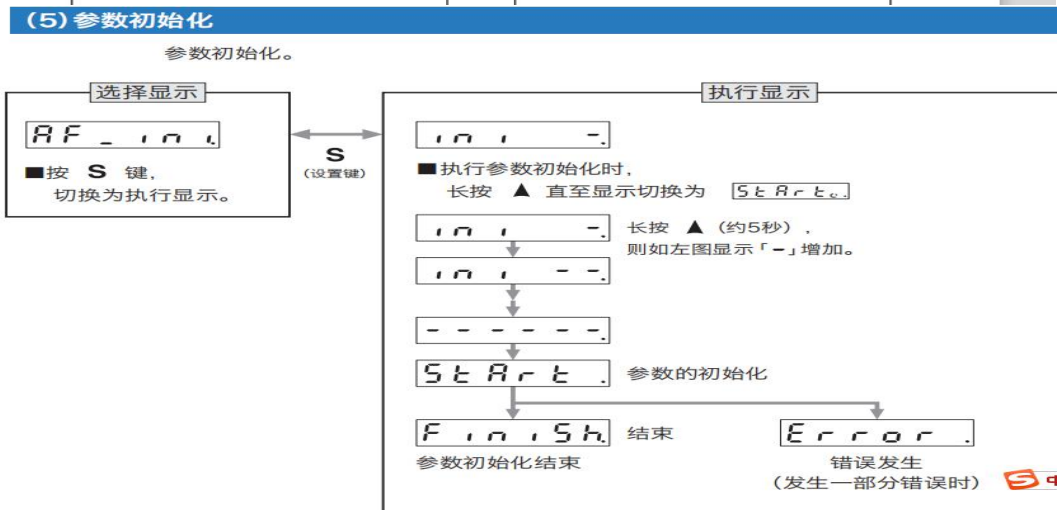
pin number	original name	signal name	line code	pin number	original name	signal name	line code
1	IN17	material station 16	J2IN1	20	GND		
2	IN18	material station 17	J2IN2	21	OUT13	material station 16	J201
3	IN19	material station 18	J2IN3	22	OUT14	material station 17	J202
4	IN20	material station 19	J2IN4	23	OUT15	material station 18	J203
5	IN21	material station 20	J2IN5	24	OUT16	material station 19	J204
6	IN22			25	OUT17	Material station 20	J205
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	J2011
13	IN29	Distributing head left	J2IN13	32	OUT24	Scooping material	J2012
14	IN30	Distributing head right	J2IN14	33	OUT25		
15	IN31			34	OUT26		
16	IN32	cut paper	J2IN16	35	OUT27		
17	3.3V			36			
18	3.3V			37	GND		
19	GND			38			

Servo motor and adjustment parameters steps

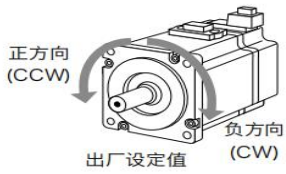
Panasonic A6





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。

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	A相 B相 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	"H"	"L"

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