

转盘式精密螺丝自动供给机

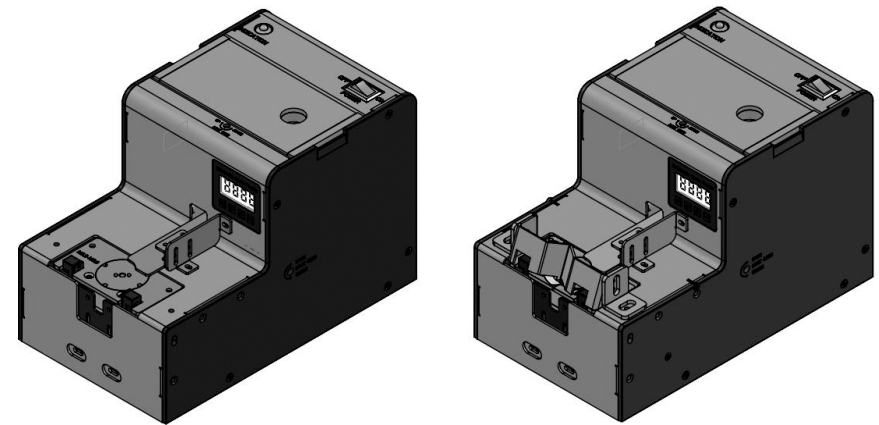
Rotary type precision automatic screw feeder

使用说明书

Instructions

(机用/手用)

(for machine / manual)



警告

WARNING

感谢您选择本产品！

本产品属于电气产品，请严格遵守使用规范，以免发生事故。

本说明书中，指出了预防事故发生的重要事项和产品使用方法。

使用之前请仔细阅读此说明书，阅读之后请妥善保管。

如遇到不能解决的问题，请联系经销商。

Thank you for choosing this product!

This product is an electrical product, please strictly observe the use specifications to avoid accidents.

In this manual, important items for preventing accidents and methods of using the products are pointed out.

Please read this manual carefully before use. Please keep it after you read it.

If you encounter a problem that cannot be solved, please contact your dealer.

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一、使用警告及注意事项



警告 WARNING

1. 确认电源适配器为原厂所提供，以免导致机台损坏影响正常工作。
2. 可拆卸电源适配器，不要损坏、修改或更换电源线，以免发生触电、火灾或故障的危险。
3. 当你在操作机器过程中发现异常现象，如刺耳的声音时，请立即停止机器运行，关掉电源开关，切断适配器连接。如果继续进行可能会导致失火、短路、性能失效或者其他损坏。所以出现上述情况请及时联系厂家技术人员处理。
4. 本机台内的螺丝轨道须在清洁干净且不能有油脂及异物，以免影响螺丝在轨道滑动。
5. 本机台在运转过程中，料槽内部请勿将手指与异物插入及倒入非螺丝物品。
6. 用电批取螺丝时不要过度用力或较大的冲击力。
7. 如果长时间不工作时，请将电源拔出

1. Use warnings and precautions

- 1). Confirm that the power adapter is provided by the factory to avoid damage to the machine and normal operation.
- 2). Removable power adapter, do not damage, modify or replace the power cord to avoid the risk of electric shock, fire or malfunction.
- 3). When you find an abnormal phenomenon, such as a harsh sound, during the operation of the machine, stop the machine immediately, turn off the power switch, and cut off the adapter connection. Failure to do so may result in fire, short circuit, performance failure, or other damage. Therefore, please contact the manufacturer's technical staff in time for the above situation.
- 4). The screw rails in this machine must be clean and free from grease and foreign matter, so as not to affect the sliding of the screws on the rail.
- 5). During the operation of this machine, do not insert fingers and foreign objects into the non-screw items inside the trough.
- 6). Do not use excessive force or large impact force when using the power to extract the screws.
- 7). If it does not work for a long time, please unplug the power supply.

二、螺丝机特点

1. 适用螺丝范围广

广泛适用于M1.0-M5.0多种类型和长度螺丝，如标准螺丝、1:1短螺丝、自攻螺丝、带垫片螺丝、铆钉、薄片及小螺母等。

2. 抗强光干扰 螺丝感应不受强光的干扰，在强光下依然能正常工作，适应的环境更广。

3. 运转流畅 螺丝在滚筒内运转，凡是未按正常方向进入轨道的螺丝，都会掉到滚筒内，进入下个循环，无卡料现象。

4. 显示计数功能 准确计数、循环、自动报警、带液晶显示面板。

5. 供料效率可调节 上料与振动独立控制，可自由设定理想的上料速度和振动大小；四分度圆盘停顿独立控制，可以根据不同螺丝和用户需求设定时间长短，适合多种作业。

6. 可大幅度提高生产效率 螺丝自动准确转到取料口处，无需人工矫正便可直接取料，生产效率大幅度提高。

7. 有故障报警功能 当非正常情况发生时，如缺料，螺丝机会自动启动报警功能。

8. 噪音小，体积小

2. Automatic screw feeder features

1). Wide range of applicable screws

Widely used in M1.0-M5.0 various types and length screws, such as standard screws, 1:1 short screws, self-tapping screws, with gasket screws, rivets, sheets and small nuts.

2). Resistance to strong light interference

The screw induction is not disturbed by strong light, and it can still work normally under strong light, and the adaptation environment is wider.

3). Smooth operation

The screw runs in the drum. Any screw that does not enter the rail in the normal direction will fall into the drum and enter the next cycle, without jamming.

4). Display counting function

Accurate counting, cycle, automatic alarm, with LCD panel.

5). Feeding efficiency can be adjusted

The feeding and vibration are independently controlled, and the ideal feeding speed and vibration size can be set freely. The four-division disc pauses independently and can be set according to different screws and user requirements, which is suitable for various operations.

6). Greatly improve production efficiency

The screw is automatically and accurately transferred to the take-up port, and the material can be directly taken without manual correction, and the production efficiency is greatly improved.

7). Fault alarm function

When an abnormal situation occurs, such as a shortage of material, the screw machine automatically activates the alarm function.

8). Low noise and small size

三、使用之前确认

为了正确使用该设备，请仔细阅读说明书，请完成这些操作后妥善保管此说明书，以便有需求时，随时可以查阅并遵照说明操作。

3. Confirm before use

In order to use the device correctly, please read the instructions carefully. Please keep this manual in good condition after you complete these operations, so that you can check and follow the instructions whenever you need it.

1、随机附件Accessories



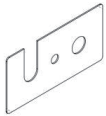
说明书一份instructions*1



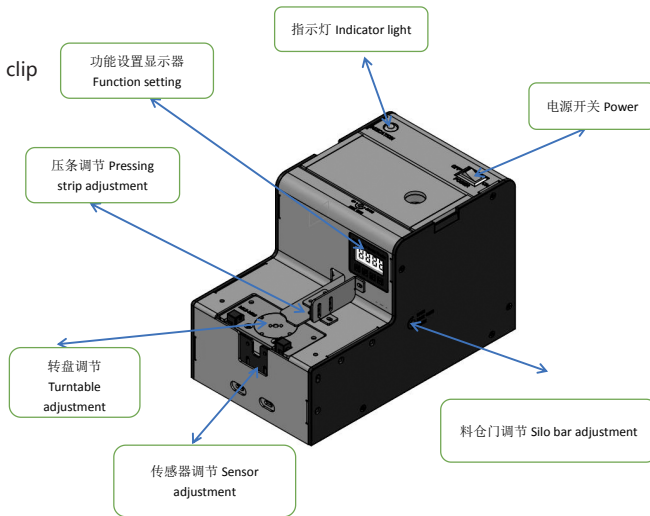
DC15V 电源适配器Power Adapter



内六角扳手Allen wrench



0.2mm、0.5mm轨道夹片Rail clip



2.螺丝机参数

输入电压：AC100V-240V 50/60HZ
输出速度：2颗/秒 $\pm 0.3S$
产品尺寸：L214.5*W126*H147.5
净重：约3KG
适合螺丝：M1.0--M5.0
最长螺丝：13mm

2). Automatic screw feeder parameters

Input voltage: AC100V-240V 50/60HZ
Output speed: 2 / sec $\pm 0.3S$
Product size: L214.5*W126*H147.5
Net weight: about 3KGS
Suitable for screws: M1.0--M5.0
Longest screw: 13mm

四、使用前检查和调整Check and adjust before use

1.螺丝尺寸确认

使用游标卡尺测量螺丝螺牙部分的实际直径，以取得大小，调节对应大小的轨道宽度和选用对应盘的大小，轨道槽宽比螺丝大0.2-0.4mm之间，螺丝长度在14mm之内。

1. Screw size confirmation

Use the vernier caliper to measure the actual diameter of the screw thread to obtain the size, adjust the rail width of the corresponding size and choose the size of the corresponding disk. The rail groove width is 0.2-0.4mm larger than the screw, and the screw length is within 14mm.



螺丝大小 Screw diameter

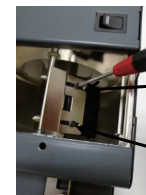
螺杆大小 Screw diameter

2.毛刷调节检查和调整

间断挡住前面感应器，将毛刷控制停止在面向机台左侧45°位置（方便调节），在轨道槽中置入5到8颗螺丝，松开固定毛刷的两颗螺丝（螺丝松开至毛刷可以活动即可），调节到毛刷碰到螺帽头部即可，毛刷太高或者太低都会影响螺丝送料的效果。

2. Brush adjustment check and adjustment

Intermittently block the front sensor, stop the brush control at 45° to the left of the machine (easy to adjust), put 5 to 8 screws in the rail slot, loosen the two screws that secure the brush (screw loose To the brush can be active), adjust to the brush to hit the head of the nut, the brush is too high or too low will affect the screw feeding effect.



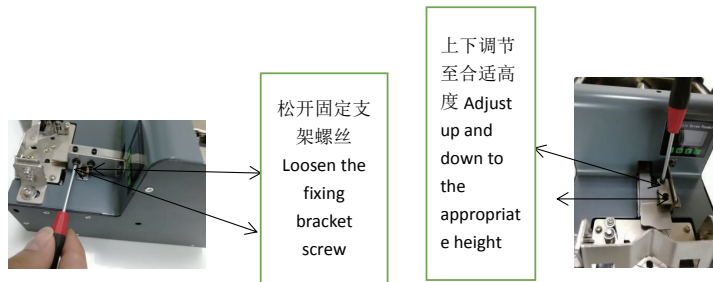
松开这两颗螺丝，上下调节毛刷 Loosen the two screws and adjust the brush up and down

3. 压板高低检查和调整

在轨道的槽中置入5-8颗螺丝，将螺丝移动至压板底部，松开固定支架的固定压板的螺丝（螺丝松开至压板可以活动即可），再调节压板上面两颗螺丝即可以对压板上下调节，压板调节至与螺帽间距为0.5mm。

3. Platen height check and adjustment

Insert 5-8 screws into the groove of the rail, move the screw to the bottom of the pressure plate, loosen the screws of the fixed pressure plate of the fixed bracket (the screw can be loosened until the pressure plate can move), then adjust the two screws on the pressure plate. For the platen adjustment, the pressure plate is adjusted to a distance of 0.5 mm from the nut.

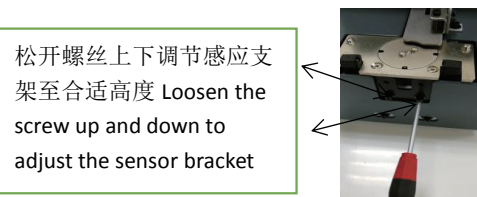


4. 感应器检查和调整

如果取料口没有螺丝，螺丝机会一直工作，如果取料口有螺丝感应，分度盘停止转动，取走螺丝后，转盘继续转动为正常；调节方法：开机调节，取料口不放螺丝，松开固定感应支架的两颗螺丝（螺丝松开至感应支架可以活动即可），把感应支架移至最低，再慢慢往上移动至有感应即可。

4. Sensor inspection and adjustment

If there is no screw in the take-up port, the screw machine will work all the time. If there is screw induction in the take-up port, the indexing plate stops rotating. After the screw is removed, the turntable continues to rotate normally. Adjustment method: adjust the boot, do not put the screw at the take-up port. Loosen the two screws that fix the sensor bracket (the screw can be loosened until the sensor bracket can move), move the sensor bracket to the lowest position, and then slowly move up to the induction.

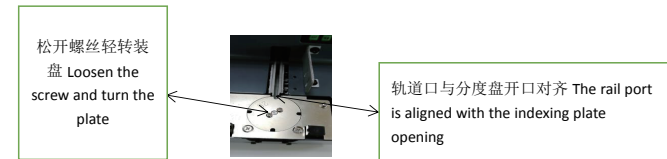


5. 分度盘检查和调整

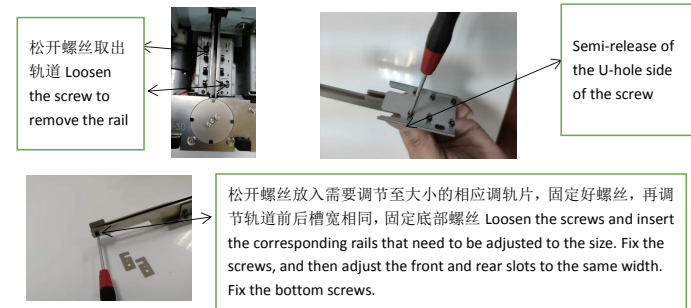
检查装盘和轨道口在工作中，分度盘开口和轨道口是否对准，轨道与分度盘间隙在0.5-1mm之间；调节方法：1' 松开固定分度盘的螺丝，开机挡住前感应器，慢慢转动分度盘与轨道口对齐，固定松开的螺丝，锁紧螺丝过程中轻压住分度盘防止底部齿轮跟转；2' 松开底部固定直振的4颗螺丝（螺丝松开至直振模组可以活动即可），开机挡住感应器对准。

5. Indexing plate inspection and adjustment

Check the loading plate and the rail port during operation, whether the indexing plate opening and the rail opening are aligned, and the gap between the rail and the indexing plate is between 0.5-1mm; adjustment method: 1' loosen the screw of the fixed indexing plate, and block the boot. Front sensor, slowly rotate the indexing plate to align with the rail port, fix the loose screw, press the indexing plate gently during the locking screw to prevent the bottom gear from rotating; 2' loosen the 4 screws fixed at the bottom (The screw can be loosened until the direct vibration module can move), and the power is blocked to align the sensor.



6. 轨道调节Rail adjustment



7. 轨道振动检查和调整

螺丝的输送速度因螺丝型号的不同而不同，可以改变马达的转速来调整螺丝的输送速度。如果马达的速度快使轨道振幅大，螺丝易重叠而造成卡料；如果马达速度慢使轨道振幅小，螺丝在轨道内移动慢，易造成供料不足；所以应按照不同型号螺丝调整轨道速度以达到最适的状态。

7. Rail vibration check and adjustment

The conveying speed of the screw varies depending on the type of screw. The speed of the motor can be changed to adjust the conveying speed of the screw. If the speed of the motor is fast, the amplitude of the rail is large, the screws are easy to overlap and cause jamming; if the motor speed is slow and the rail amplitude is small, the screw moves slowly in the rail, which may cause insufficient feeding; therefore, the rail speed should be adjusted according to different types of screws. Get the best condition.

五、操作界面说明Operation interface description

显示界面示意图Display interface diagram



1、按键功能

S E T : 系统设定/确认键

左右: 功能选择/左右移动/组数查看键

上下: 加数键/复位键

E S C : 退出/清零键

1, Button function

S E T: System Settings / Confirmation Key

Left and right: function selection / left and right movement / group number view button

Up and down: add/reset button

E S C: Exit/clear key

2、操作功能描述

1、恢复出厂设定: 在待机或工作状态下同时按左右键及上下键3s, LED显示屏闪烁并蜂鸣器提示, 系统恢复出厂设定值。

2、统计组数查看: 按左右键1s后显示组数, 按ESC键清零。

3、SET 键功能描述

3.1在待机或工作状态下, 按SET 键2s 系统进入功能选择, 按左右键选择不同功能:

2, operation function description

1). Restore the factory settings: Press the left and right button and the up and down keys for 3s in standby or working state. The LED display will flash and the buzzer will prompt the system to restore the factory settings.

2). Statistics group view: Press the left and right button to display the number of groups after 1s, press ESC to clear.

3), SET key function description

3.1 In standby or working state, press SET key 2s system to enter function selection, press left and right button to select different functions:

C计数数量设定Count quantity setting

U1..... 备用spare


U2上料速度设定Feed speed setting


U3振动速度设定Vibration speed setting

T上料停止时间设定Feed stop time setting

L蜂鸣器设定Buzzer setting


R..... 前传感器感应时长设定Front sensor sensing duration setting


3.1.1选择 C 时, LED显示屏显示 , 按SET键进入计数数量设定, 按左右键移动个位数, 按上下键调整数值(系统出厂值9999, 设定范围1~9999) 按SET 键确认所需数值设定, 参数设定完成, 并返回到功能菜单, 可继续进行其他参数设定, 如不需其他参数设定按ESC键退出。


3.1.1When C is selected, the LED display shows , Press the SET button to enter the count quantity setting, press the left and right button to move the single digit, press the up and down keys to adjust the value (the system default value is 9999, the setting range is 1~9999). Press the SET button to confirm the desired value setting, and the parameter setting is completed. And return to the function menu, you can continue to make other parameter settings, if you do not need other parameter settings, press ESC to exit.


3.1.2选择 U1 时, 待定功能。


3.1.2 When U1 is selected, the function is to be determined.


3.1.3选择 U2 时, LED显示屏显示 , 按SET键进入上料速度设定, 按上下键调整数值(系统出厂值3, 设定范围1-5), 按SET 键确认所需数值设定, 参数设定完成, 并返回到功能菜单, 可继续进行其他参数设定, 如不需其他参数设定按ESC键退出。

3.1.3 When U2 is selected, the LED display shows , Press the SET button to enter the loading speed setting, press the up and down keys to adjust the value (system default value 3, setting range 1-5), press the SET button to confirm the desired value setting, the parameter setting is completed, and return to the function menu. You can continue to set other parameters. If you do not need other parameter settings, press ESC to exit.

3.1.4选择 U3 时, LED显示屏显示 , 按SET键进入振动速度设定, 按上下键调整数值(系统出厂值5, 设定范围0-29), 按SET 键确认所需数值设定, 参数设定完成, 并返回到功能菜单, 可继续进行其他参数设定, 如不需其他参数设定按ESC键退出。


3.1.4 When U3 is selected, the LED display will show , press SET to enter the vibration speed setting, press the up and down keys to adjust the value (system default value 5, setting range 0-29), press SET key to confirm the desired value setting. After the parameter setting is completed and return to the function menu, you can continue to set other parameters. If you do not need other parameter settings, press ESC to exit.


3.1.5 选择T 时, LED显示屏显示 , 按SET键进入上料停止时间设定, 按左右键移动个位数, 按上下键调整数值(系统出厂值15, 设定范围0~999), 按SET 键确认所需数值设定, 参数设定完成, 并返回到功能菜单, 可继续进行其他参数设定, 如不需其他参数设定按ESC键退出。

3.1.5 When T is selected, the LED display will show , press SET to enter the loading

stop time setting, press left and right to move the single digit, press the up and down keys to adjust the value (system default value 15, setting range 0~999), Press SET to confirm the desired value setting, parameter setting is completed, and return to the function menu, you can continue to set other parameters. If you do not need other parameter settings, press ESC to exit.


※注：此上料停止时间指的是螺丝到取料位置后，推块上料停止时间。Note: This loading stop time refers to the stop time of the push block after the screw is moved to the reclaiming position.

3.1.6选择L时，LED显示屏显示 ，按SET键进入蜂鸣器设定，按上下键调整数值（系统出厂值1）；


3.1.6 When L is selected, the LED display will show ，press SET to enter the buzzer setting, press the up and down keys to adjust the value (system default value 1);

- 1....为打开蜂鸣器Buzzer open
- 0....为关闭蜂鸣器Buzzer close

按SET 键确认所需数值设定，参数设定完成，并返回到功能菜单，可继续进行其他参数设定，如不需其他参数设定按ESC键退出。
Press SET to confirm the desired value setting, parameter setting is completed, and return to the function menu, you can continue to set other parameters. If you do not need other parameter settings, press ESC to exit.

3.1.7选择R时，LED显示屏显示 ，按SET键进入前感应器感应时长设定，按左右键移动个位数，按上下键调整数值（系统出厂值300，设定范围：0~999），

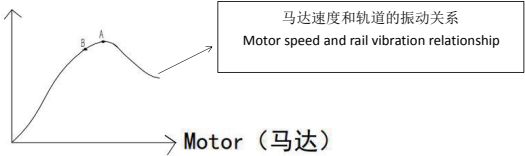
按SET 键确认所需数值设定，参数设定完成，并返回到功能菜单，可继续进行其他参数设定，如不需其他参数设定按ESC键退出。

3.1.7 When R is selected, the LED display will show ，press SET to enter the front sensor sensing time setting, press left and right to move the single digit, press the up and down keys to adjust the value (system default value 300, setting range: 0~999), Press SET to confirm the desired value setting, parameter setting is completed, and return to the function menu, you can continue to set other parameters. If you do not need other parameter settings, press ESC to exit.

六、维护和保养Maintenance and maintenance

1.速度调整Speed adjustment

(1) 振动马达速度特性Vibration motor speed characteristics



(2) 上料滚轮延时的调整：当螺钉较大或螺钉外形不利进入轨道槽时，将滚轮延时长，反之螺钉较小时调短。

Adjustment of the delay of the loading roller: When the screw is large or the screw shape is unfavorable to enter the rail slot, the roller is delayed and the length is shortened when the screw is small.

(3) 轨道振动延时调整：当螺钉较大或螺钉外形不利进入轨道槽时，将轨道振动延时长，反之螺钉较小时调短。

Rail vibration delay adjustment: When the screw is large or the screw shape is unfavorable to enter the rail groove, the rail vibration delay is lengthened, and when the screw is small, it is shortened.

2.为了使取螺丝更轻松，还需注意以下几点：

- (1) 转盘必须与轨道缺口对准，并且压板与螺丝螺帽间距约0.5-1mm。
- (2) 建议在电批旋转时取螺钉，这样将会更方便。
- (3) 运动部件每隔三个月适当加注润滑油，使设备运转顺畅。

2. In order to make the screw easier, you should also pay attention to the following points:

- (1) The turntable must be aligned with the rail notch, and the distance between the platen and the screw nut is about 0.5-1 mm.
- (2) It is recommended to take the screws when the electric batch is rotated, which will be more convenient.
- (3) The moving parts should be properly filled with lubricating oil every three months to make the equipment run smoothly.

螺丝机保养Screw machine maintenance

序号 No.	保养部件与组件 Maintenance parts and components	保养内容 Maintenance content
1	轨道Rail	每隔15日用酒精清洗(擦拭) 轨道内侧面 Clean (wipe) the inner side of the rail with alcohol every 15 days
2	对射传感器Opposite sensor	建议每隔半个月对前端对射传感器用酒精擦拭清洗 It is recommended to wipe the front-end radiation sensor with alcohol every half month.
3	传动齿轮Transmission gear	每隔三个月加注润滑脂Fill grease every three months
4	毛刷传动导杆Brush drive guide	每隔三个月加注润滑脂Fill grease every three months
5	直振机构件 Direct vibration machine component	每隔半年对所有螺钉检查有无松动并紧固 Check all screws every six months for looseness and tightening

故障处理Troubleshooting

故障 malfunction	原因 reason	处理方法 Processing method
螺丝机没电 no power	1.电源坏 2.开关坏 3.DC插座坏 1. Power supply is bad 2. Switch is broken 3. DC socket is bad	更换配件 Replacement parts
电源灯亮机器不工作 The power light is on and the machine is not working.	1.出口感应器没对好位置或物品挡住 2.马达电源线断 3.螺丝机活动部件卡住（偏心轮处，齿轮处） 1. The exit sensor is not blocking the good position or item 2. Motor power line is broken 3. The moving parts of the screw machine are stuck (at the eccentric wheel, at the gear)	1.检测或调整 2.重新焊接 3.清除活动部件异物 1. Detect or adjust 2. Re-welding 3. Remove moving parts foreign objects
轨道卡螺丝料仓漏螺丝 The rail is stuck by the screw Silo leaking screw	毛刷高低、轨道间隙、压板位置未调好、料仓挡板上下左右未调好 The height of the brush, the rail clearance, the position of the pressure plate are not adjusted well, and the baffle baffle is not adjusted up and down.	检测后做相应调整，调整挡板位置 Adjust after adjustment to adjust the position of the bezel
信号灯长亮 The signal light is always on	1.对射感应器损坏 2.传感器支架下落 1. Damage to the sensor 2. Sensor bracket drop	1.检查更换 2.检查后做相应调整 1. Check and replace 2. Make adjustments after inspection
出口一直振动不停 The exit has been vibrating all the time.	1.直振送料延时太长 2.出料口感应位置不合适 3.螺丝头位置没在感应器检测范围内 1. Direct vibration feed delay is too long 2. The discharge port sensing position is not suitable 3. The screw head position is not within the sensor detection range.	做相应调整 Make adjustments accordingly
出螺丝太慢 The screw is too slow	1.送料供料速度慢 2.延时时间短 3.轨道间隙调整不合适 4.挡板顶住轨道 5.轨道与料仓前板无间隙 6.振动马达与底板之间有异物 1. Feeding feed rate is slow 2. Short delay time 3. Rail clearance adjustment is not suitable 4. The baffle is against the rail 5. There is no gap between the rail and the front plate of the silo 6. There is a foreign object between the vibration motor and the bottom plate.	1.调整马达速度 2.加大送料供料延时 3.做相应调整 4.调整间隙（0.5-1mm） 5.调整间隙（0.5-1mm） 6.清除异物 1. Adjust the motor speed 2. Increase the feed feeding delay 3. Make the appropriate adjustments 4. Adjust the gap (0.5-1mm) 5. Adjust the clearance (0.5-1mm) 6. Remove foreign objects

外接信号线

机身后部有引出两根信号线，该信号可用来识别是否有螺丝到位。

红（紫）线：信号线，有螺丝时导通，无螺丝时断开；

黑（灰）线：公共地线。

允许最大电流：100mA；电压范围：5-24V；引线长度：小于3m。

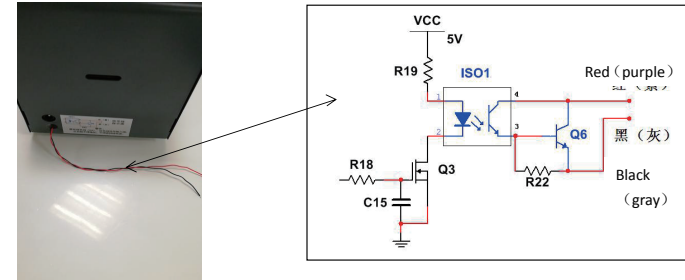
External signal line

There are two signal lines at the rear of the fuselage that can be used to identify if a screw is in place.

Red (purple) line: signal line, which is turned on when there is a screw, and disconnected when there is no screw;

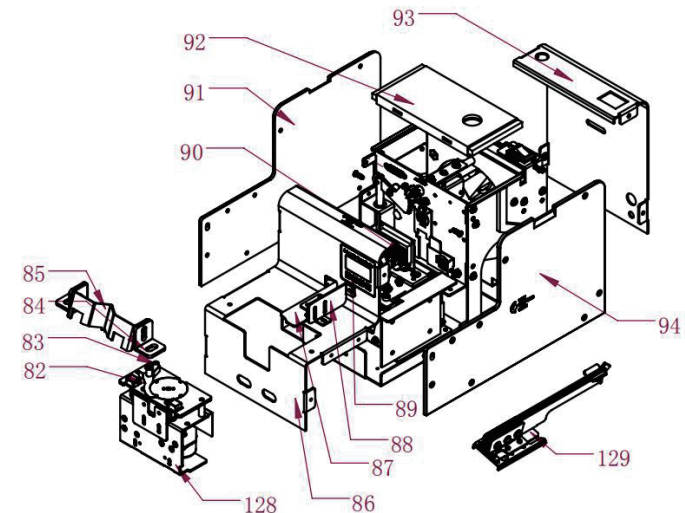
Black (gray) line: public ground.

Maximum current allowed: 100mA; voltage range: 5-24V; lead length: less than 3m.

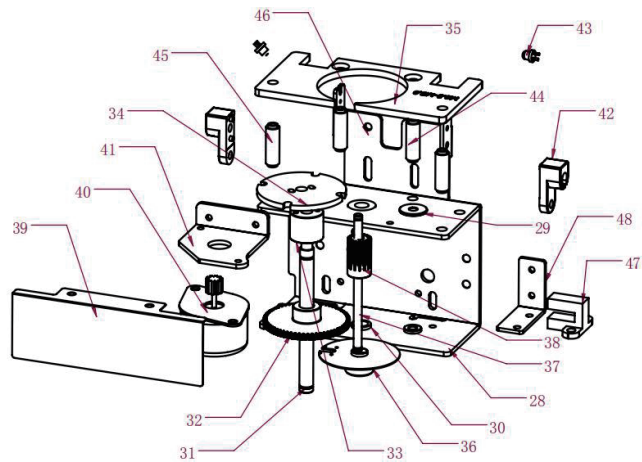


七、结构零件图Structural part drawing

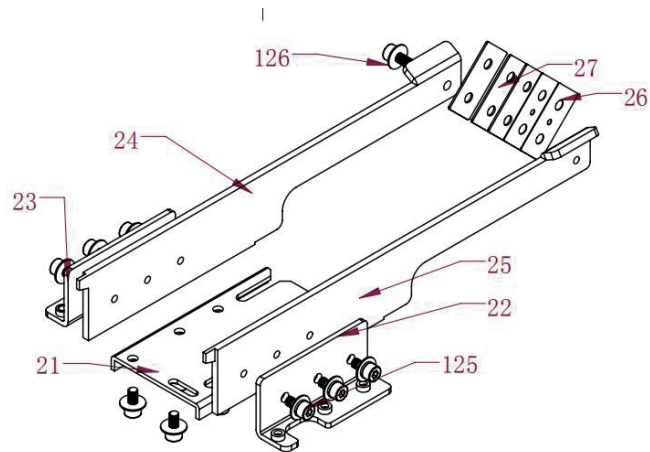
1.总外观装置分解图Total appearance device exploded view



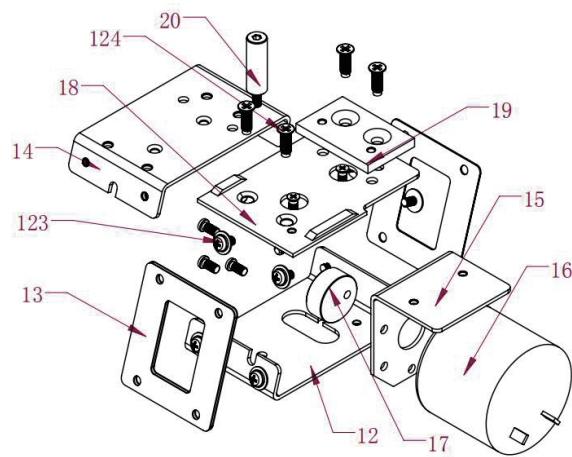
2.分度转盘装置图Indexing turntable device diagram



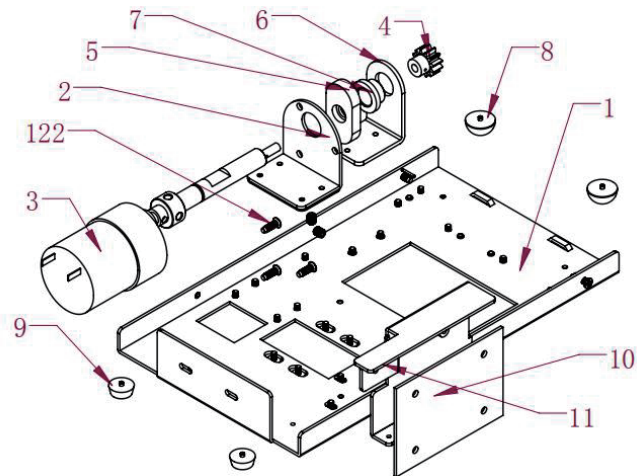
3.轨道组件分解图Rail component exploded view



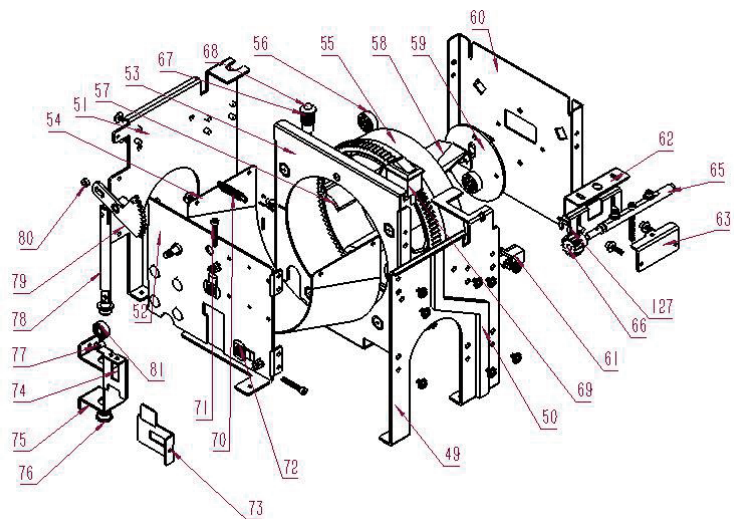
4.直振组件分解图Direct vibration component exploded view



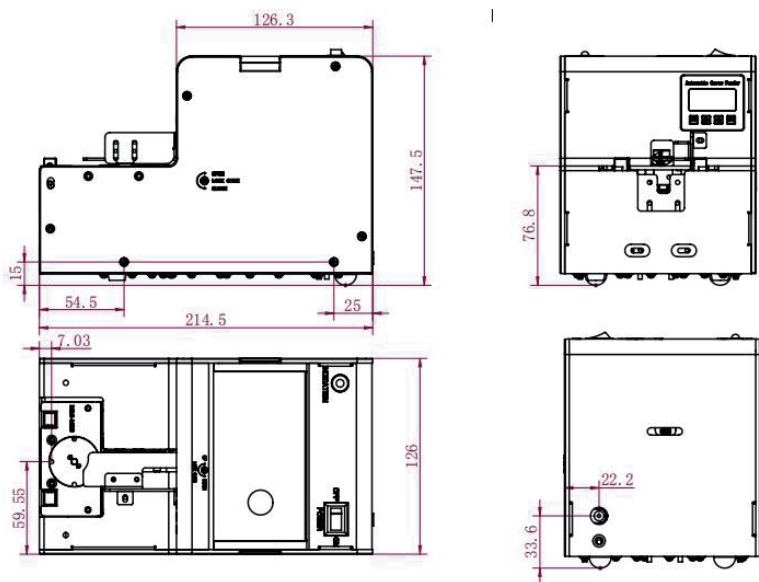
5.底座组件分解图Base assembly exploded view



6.结构分解图Structural decomposition diagram



7.外形尺寸图 (单位 : mm) Dimensional drawing (unit: mm)



八、配件清单Parts List :

编号 No.	中文名称 Chinese	英文名称 English	数量 Quantity
1	底板	Bottom plate	1
2	上料电机座	Feeding motor base	1
3	上料电机	Feeding motor	1
4	上料齿轮	Feeding gear	1
5	传动轴凸轮	Drive shaft cam	1
6	传动轴套座	Drive shaft sleeve	1
7	传动轴后套	Drive shaft rear sleeve	1
8	后脚垫	Back ottomans	2
9	前脚垫	Front ottomans	2
10	电路板	Circuit board	1
11	电路安装板	Circuit mounting board	1
12	振动器下板	Vibrator lower plate	1
13	振动器弹片	Vibrator shrapnel	2
14	振动器上板	Vibrator upper plate	1
15	振动器电机座	Vibrator motor base	1
16	振动电机	Vibration motor	1
17	振动器凸轮	Vibrator cam	1
18	料道安装板	Feeding plate	1
19	料道固定垫板	Feeding fixing plate	1
20	料道固定螺丝	Material fixing screw	1
21	料道固定板	Feeding plate	1
22	料道固定座右	Feedway fixing seat right	1
23	料道固定座左	Feeding bracket left	1
24	料道左板	Material left plate	1
25	料道右板	Material right plate	1
26	0.2 料道间垫板	0.2 channel pad	1
27	0.5 料道间垫板	0.5 channel pad	1
28	齿轮箱盒	Gear box	1
29	分度轴铜套小	Indexing shaft copper sleeve small	2
30	分度轴铜套大	Indexing shaft copper sleeve	2
31	分度轮旋转轴	Index wheel rotation axis	1
32	大齿轮 (铜)	Large gear (copper)	1
33	排放器	Discharger	1
34	分度盘	Indexing plate	1
35	分度板 (机用)	Indexing plate (for machine)	1
36	裂缝圆盘	Crack disc	1

37	分度辅助轮旋转轴	Indexing auxiliary wheel rotation axis	1
38	小齿轮（铜）	Pinion (copper)	1
39	挡板	Baffle	1
40	步进电机	Stepper motor	1
41	步进电机支架	Stepper motor bracket	1
42	对射传感器座	Optoelectronic sensor holder	2
43	对射二极管	Optoelectronic diode	1 对 pair
44	支柱（用手）	Pillar (for manual)	6
45	支柱（机用）	Pillar (for machine)	4
46	对射感应器座	Opposite sensor holder	1
47	槽型光电开关	Slot type photoelectric switch	1
48	L 型支架	L-shaped bracket	1
49	料仓右板	Silo right plate	1
50	料仓板棉贴	Silo board	2
51	料仓左板	Silo left plate	1
52	料仓前板	Silo front plate	1
53	料仓后板	Silo back plate	1
54	料仓斗	Material bucket	1
55	上料转盘	Feeding carousel	1
56	深沟球轴承（d4*d13*5）	Deep groove ball bearings (d4*d13*5)	1
57	上料转盘叶片	Feeding turntable blade	1
58	落料斗	Drop hopper	1
59	转盘后封板	Turntable rear sealing plate	1
60	转盘封板	Turntable sealing plate	1
61	DC 插座	DC socket	1
62	毛刷安装板	Brush mounting plate	1
63	毛刷压板	Brush plate	1
64	毛刷	brush	1
65	毛刷转轴	Brush shaft	1
66	小齿轮（POM）	Pinion gear (POM)	1
67	指示灯座	Indicator holder	1
68	指示灯	Indicator light	1
69	开关	switch	1
70	毛刷齿轮拉簧	Brush gear tension spring	1
71	料仓料道挡板螺丝	Silo material channel baffle screw	1
72	料仓料道挡板压板	Silo material baffle plate	1
73	料仓料道右挡板	Silo material channel right baffle	1
74	料仓料道上挡板	Baffle on the silo	1
75	毛刷扇齿顶杆套座	Brush fan ejector	1

[illegible]

