



气吸式螺丝供料器

Vacuum Screw Feeder

带夹持扶正机构螺丝供料器

Screw Feeder with Clamping and Alignment Mechanism

KL-S30 KL-S60 KL-S90

KL-S30-FZ KL-S60-FZ KL-S90-FZ



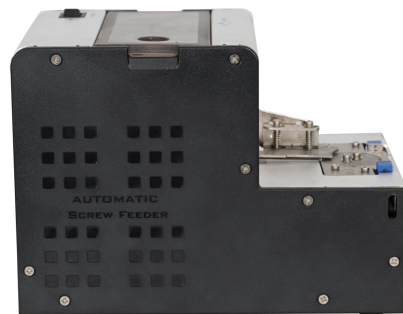
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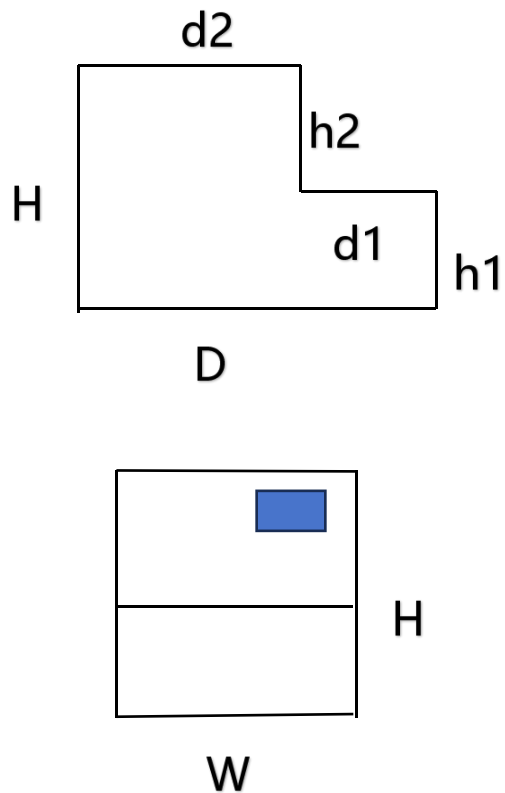
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✧ KL-S30、KL-S60、KL-S90

- ✧ 根据螺丝定制，可适用 M1.0-M6.0 的螺丝，使用范围广；
- ✧ Customizable for various screws, compatible with screw sizes from M1.0 to M6.0, offering a wide range of applications.
- ✧ 故障少，噪音低，有计数功能，卡料反转和故障报警功能；
- ✧ Low failure rate, low noise, equipped with counting function, jam reversal, and fault alarm capabilities.
- ✧ 独特设计外形体积小，内部料仓大空间，运作流畅，效率高；
- ✧ Unique compact design with a large internal hopper capacity. Ensures smooth operation and high efficiency.
- ✧ 有料信号输出，配合自动机使用，重复定位精度 ± 0.02 ；
- ✧ Includes a material-in-place signal output for seamless integration with automation machinery. Features a repeat positioning accuracy of ± 0.02 mm.
- ✧ 操作简单，便于维护。
- ✧ Simple operation and easy maintenance.



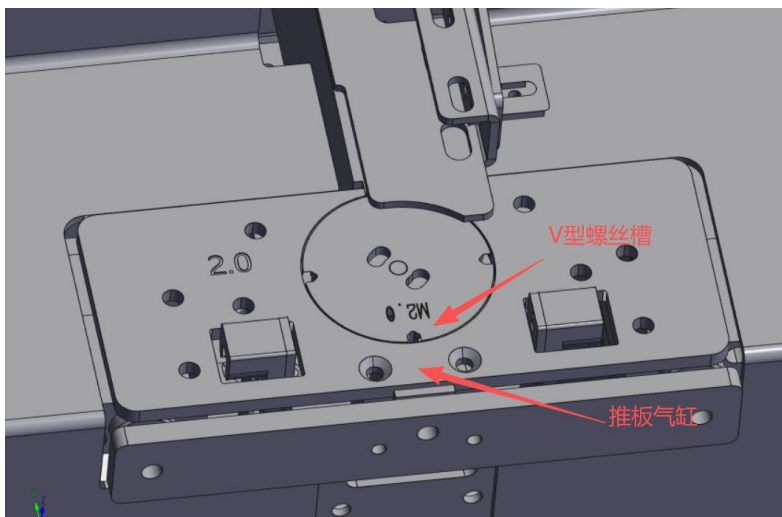
供料器型号 Feeder Model	KL-S30	KL-S60	KL-S90
外形尺寸 Dimensions	W125*H138 (含脚垫 148/ncluding foot pad: 148) *D201mm以3D为准 Subject to 3D drawing	W166*H168 (含脚垫 178/Including foot pad: 178) *D263mm以3D为准 Subject to 3D drawing	W195*H210*D287.5 以3D为准 Subject to 3D drawing
螺丝大小 Screw Size	M1.0-M5.0	M2.0-M6.0	M3.0-M6.0
料仓容量 Hopper Capacity	200ml 示例M3X6的螺丝约放850颗 Approx. 850 pcs of example M3x6 screws	450ml 示例M3X6的螺丝约放3000颗 Approx. 3000 pcs of example M3x6 screws	900ml 示例M3X6的螺丝约放7000颗 Approx. 7000 pcs of example M3x6 screws
螺丝长度 Screw Length	≤16mm	≤20mm	≤30mm
h1高度 h1 Height	73mm	93mm	123.5±1mm
重 量 Weight	≈2.9kg	≈4.9kg	≈6kg
出料速度 Feeding Speed	40-60pcs/分钟/min	40-60pcs/分钟/min	40-60pcs/分钟/min
电源适配器 Power Adapter	输入AC220V，输出DC15V Input AC220V， Output DC15V		
订货需提供螺丝200颗 200 screws must be provided for order customization.			



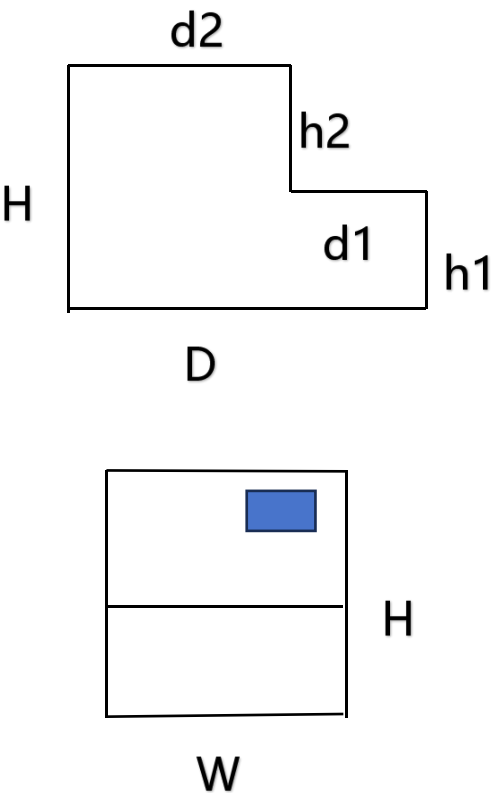


夹持扶正机构

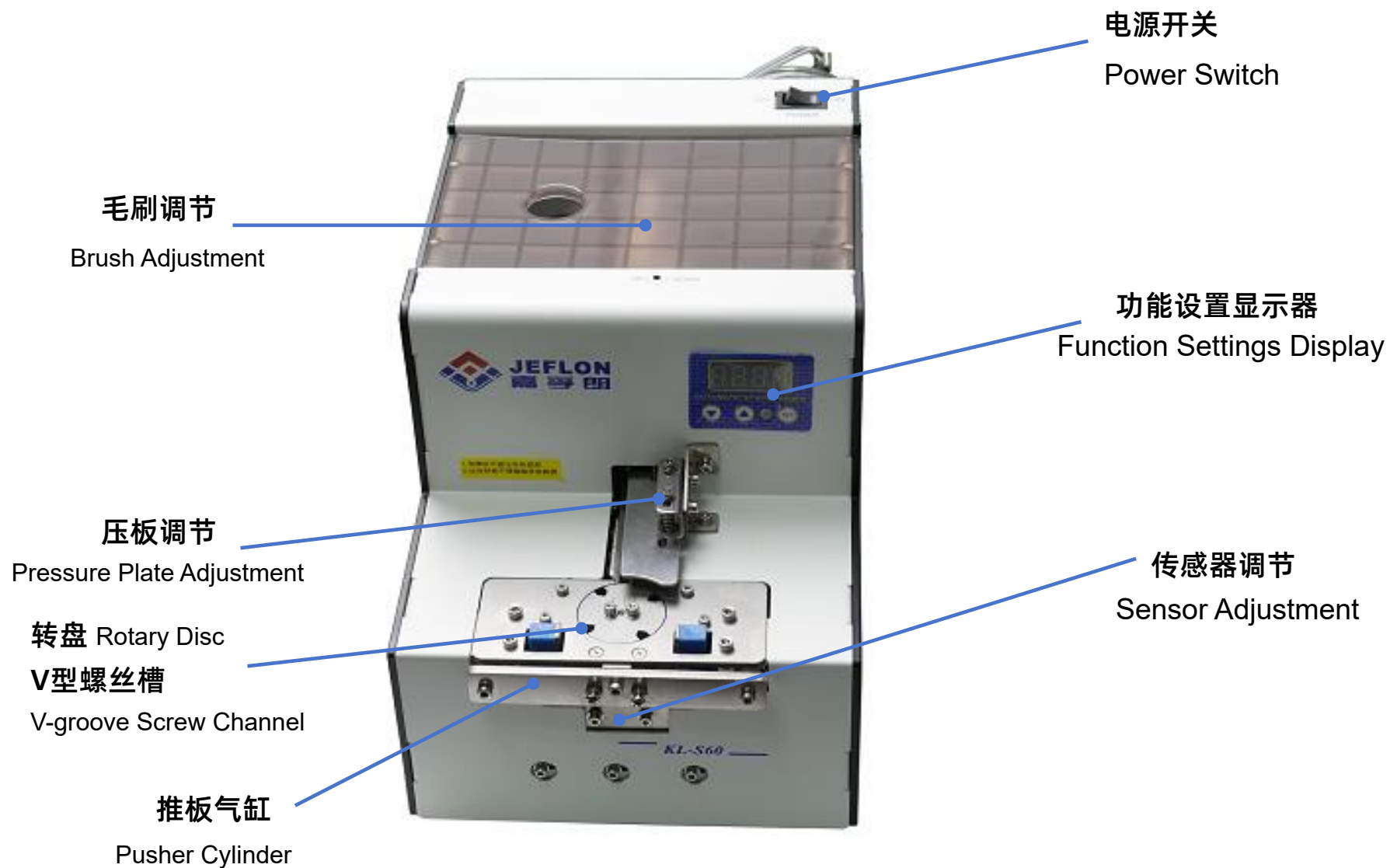
Clamping and Alignment Mechanism



- ✓ 适用于 M2.0-M6.0 的螺丝;
- ✓ Applicable to M2.0-M6.0 screws;
- ✓ 轨道可以取出调整, 操作简单;
- ✓ The feeding rail is removable for easy adjustment and simple operation;
- ✓ 螺丝供料精度高, 供料重复精度 ± 0.02 ;
- ✓ High screw feeding accuracy, with a repeat feeding precision of ± 0.02 ;
- ✓ 有信号输出, 可以跟自动机的控制系统交互;
- ✓ Equipped with signal output for seamless communication and interaction with the automatic machine's control system;
- ✓ 螺丝取料点稳定, 不会出现粘连现象, 螺丝不会歪, 拾取轻松自如;
- ✓ The screw pick-up point is stable, preventing adhesion (sticking) and screw tilting, allowing for easy and smooth picking;
- ✓ 通过调整振动参数可以调整出料速度, 出料速度快每分钟可达到 40-60PCS/ 分钟;
- ✓ The dispensing speed can be adjusted by modifying the vibration parameters, achieving a fast speed of 40-60 pieces per minute (PCS/min);
- ✓ 无卡螺丝现象, 传动简单可靠, 螺丝在滚筒内旋转落料, 如果未进入轨道的螺丝被清理到滚筒内进入下个循环;
- ✓ No screw jamming occurs. The transmission is simple and reliable. Screws are dispensed by rotation inside the drum; any screws that fail to enter the rail are cleared back into the drum for the next cycle;
- ✓ **夹持扶正机构:** 接收气压信号后, 推动推块, 将从V型槽一侧送入的螺丝夹紧在V型槽中, 消除螺丝自由度, 使螺丝处于完全笔直、高度位置固定的理想状态;
- ✓ Clamping and Alignment Mechanism: Upon receiving a pneumatic signal, a pusher block is activated to clamp the screw (fed from the side of the V-groove) tightly within the V-groove. This eliminates the screw's degrees of freedom, placing it in an ideal state: completely straight and at a fixed height position;
- ✓ **V型螺丝槽:** V型设计能够包裹并卡住螺丝的螺纹部分或头部, 确保螺丝被限制在中心位置, 不会左右晃动;
- ✓ V-groove Screw Channel: The V-shape design wraps around and secures the screw's thread or head, ensuring the screw is restricted to the center position and will not wobble laterally;
- ✓ 气缸推力精确控制, 力度精准计算, 可靠地扶正夹紧螺丝, 避免力量过大损伤螺丝螺纹或头部。
- ✓ The cylinder thrust is precisely controlled and accurately calculated, reliably aligning and clamping the screw while preventing excessive force that could damage the screw thread or head.

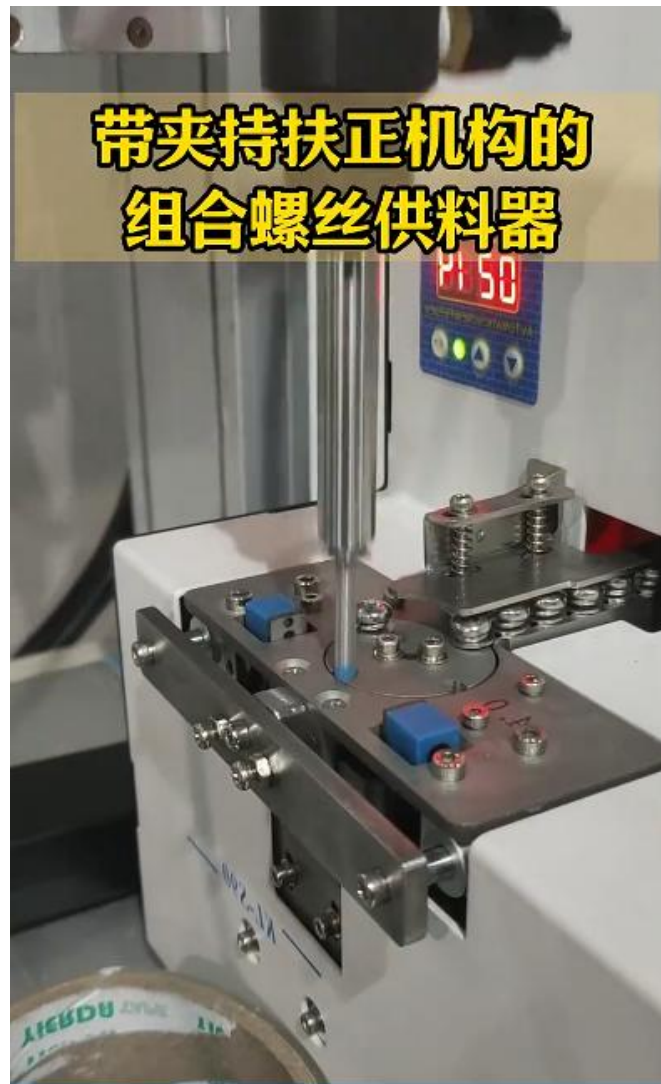


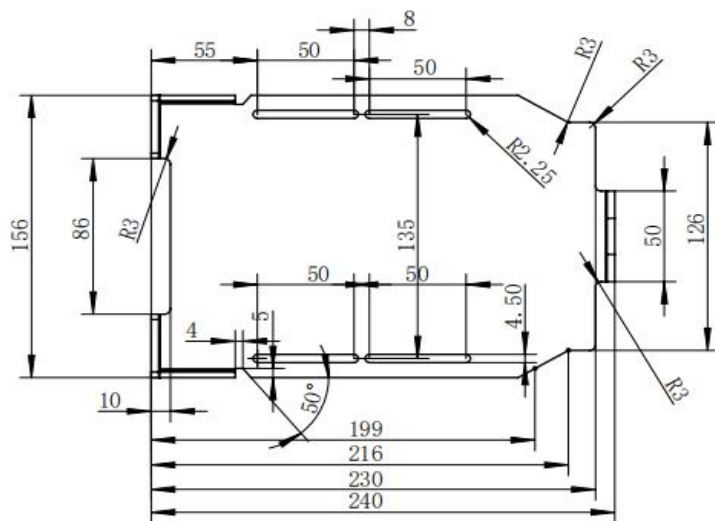
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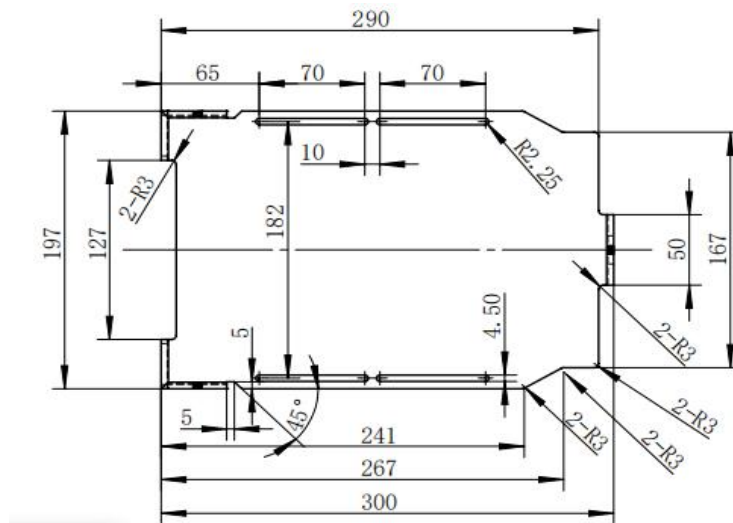
此部分为图示，可向对应业务咨询案例视频。

This section features illustrations. Please contact the corresponding sales representative for case study videos.

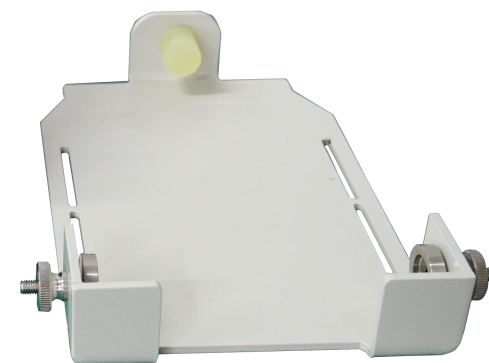




KL-G30



KL-G60



左右微调螺丝
Left-Right Fine
Adjustment Screw



底座型号 Base Model	KL-G30 (选购配件 Optional Accessory)	KL-G60 (选购配件 Optional Accessory)
外形尺寸 Dimensions	W135*D240mm	W182*D300mm
适合型号 Compatible Feeder Model	KL-S30系列 Series	KL-S60系列 Series

固定螺丝
Fixing Screw





KL-S30



KL-S60



KL-S90

1.按下 SET 键 3 秒, 进入功能菜单选择层界面, 按 “▲” “▼” 键进行相应参数值的调节

1.Press the SET button for 3 seconds to enter the function menu selection interface. Use “▲” and “▼” to adjust the corresponding parameters.

a--xx: 直振振动强度调节, “▲” 强度增大; “▼” 强度减小。

a--xx: Vibration Intensity Adjustment. “▲” increases intensity; “▼” decreases intensity.

设置好后按下 “SET” 键, 进入下一参数设置

After setting, press the “SET” button again to enter the next parameter setting.

b--xx: 转盘有料后直振震动延时, “▲” 延时增加; “▼” 延时减少。

b--xx: Rotary Disc Vibration Delay (after material is present). “▲” increases delay; “▼” decreases delay.

设置好后按下 “SET” 键, 进入下一参数设置

After setting, press the “SET” button again to enter the next parameter setting.

c--xx: 转盘有料后滚动上料及毛刷延时, “▲” 延时增加; “▼” 延时减少。

c--xx: Rotary Disc Feeding and Quota Delay (after material is present). “▲” increases delay; “▼” decreases delay.

设置好后按下 “SET” 键, 进入下一参数设置

After setting, press the “SET” button again to enter the next parameter setting.

d--xx: 设置转盘速度, “▲” 转速增加; “▼” 转速减小。

d--xx: Continuous Speed Setting. “▲” increases speed; “▼” decreases speed.

设置好后按下 “SET” 键, 进入下一参数设置

After setting, press the “SET” button again to enter the next parameter setting.

E--x: 设置是否计数模式, “0” 不计数, “1” 计数

E--x: Set Counting Mode. “0” is No Counting; “1” is Counting.

设置好后按下 “SET” 键, 回到运行界面【计数界面】。

After setting, press the “SET” button again to return to the running interface (Counting Interface).

2.运行界面按下 “▲” 键可清除当前螺丝计数。

2.In the running interface, press “▲” and “▼” simultaneously to clear the current screw count.

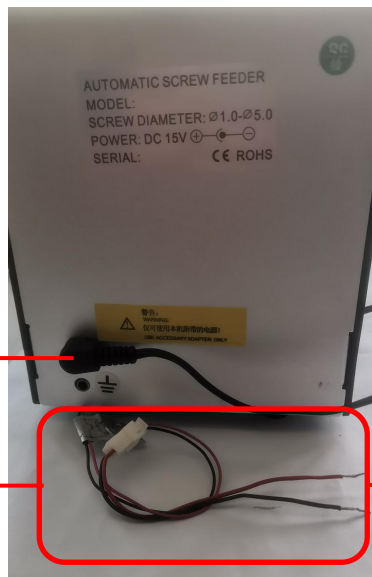
以上三款供料器有料信号接线方式相同, 如右图。

The three feeder models above share the same wiring method for the material-in-place signal, as shown in the diagram.

电源线 Power Cable

默认有料信号线长240mm, 如不是搭配嘉孚朗锁螺丝机使用, 需自行根据需求延长

The default material-in-place signal cable length is 240 mm. If you do not connect it, you must cut the connector end and wrap the wires. If needed, you must extend the cable length yourself.



红线 Red Wire

黑线 Black Wire

NPN接线方式/NPN Connection

接PLC或控制器输入端
Connect to the input terminal of the PLC or Controller

接24V电源0V
Connect to 24V Power Supply 0V



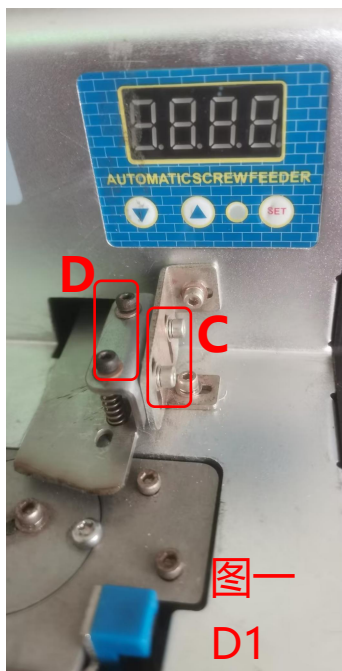
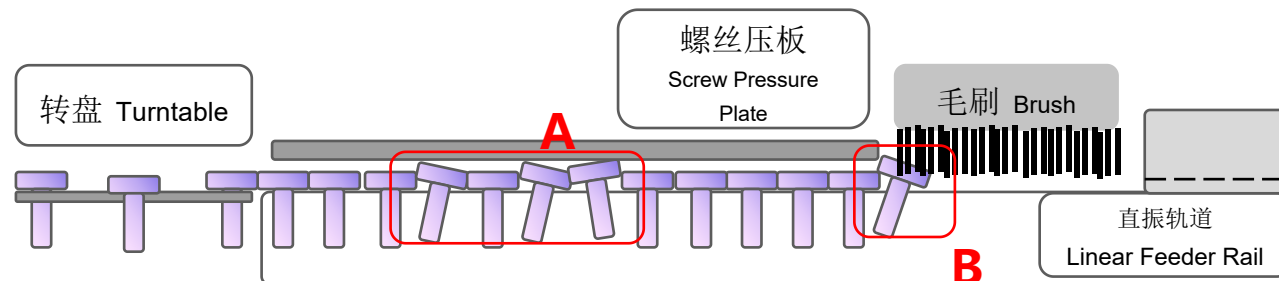
红线 Red Wire

黑线 Black Wire

PNP接线方式/PNP Connection

接24V电源+24V
Connect to 24V Power Supply +24V

接PLC或控制器输入端
Connect to the input terminal of the PLC or Controller



如上图，常见有AB两种卡料形式，解决此卡料现象基本需要调节两处。

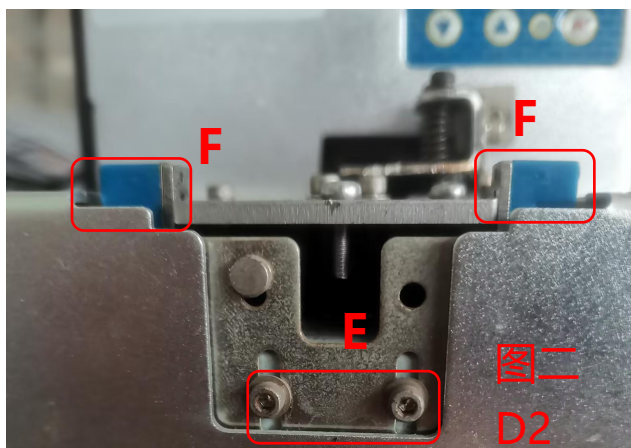
As illustrated in D1 (referencing the common feeder view), material jams typically occur in two forms, A and B. Resolving these jamming issues primarily requires two basic adjustments.

1.图一中松掉侧面C处两颗螺丝（松开即可，勿拆），调节处两颗螺丝，往下拧是控制螺丝压板下压，调到合适高度（压板距离螺帽顶部大约1到2mm，视具体情况而定），再拧紧侧面C处两颗螺丝即可。

1.Regarding the screw pressure plate: loosen (but do not remove) the two screws at position C on the side of the unit. Then, adjust the two control screws on top—turning them downwards (clockwise) controls the downward pressure of the screw pressure plate—to reach an appropriate height (the pressure plate should sit approximately 1 to 2 mm above the top of the screw head, adjusting according to the specific scenario). Once the height is set, re-tighten the two screws at position C.

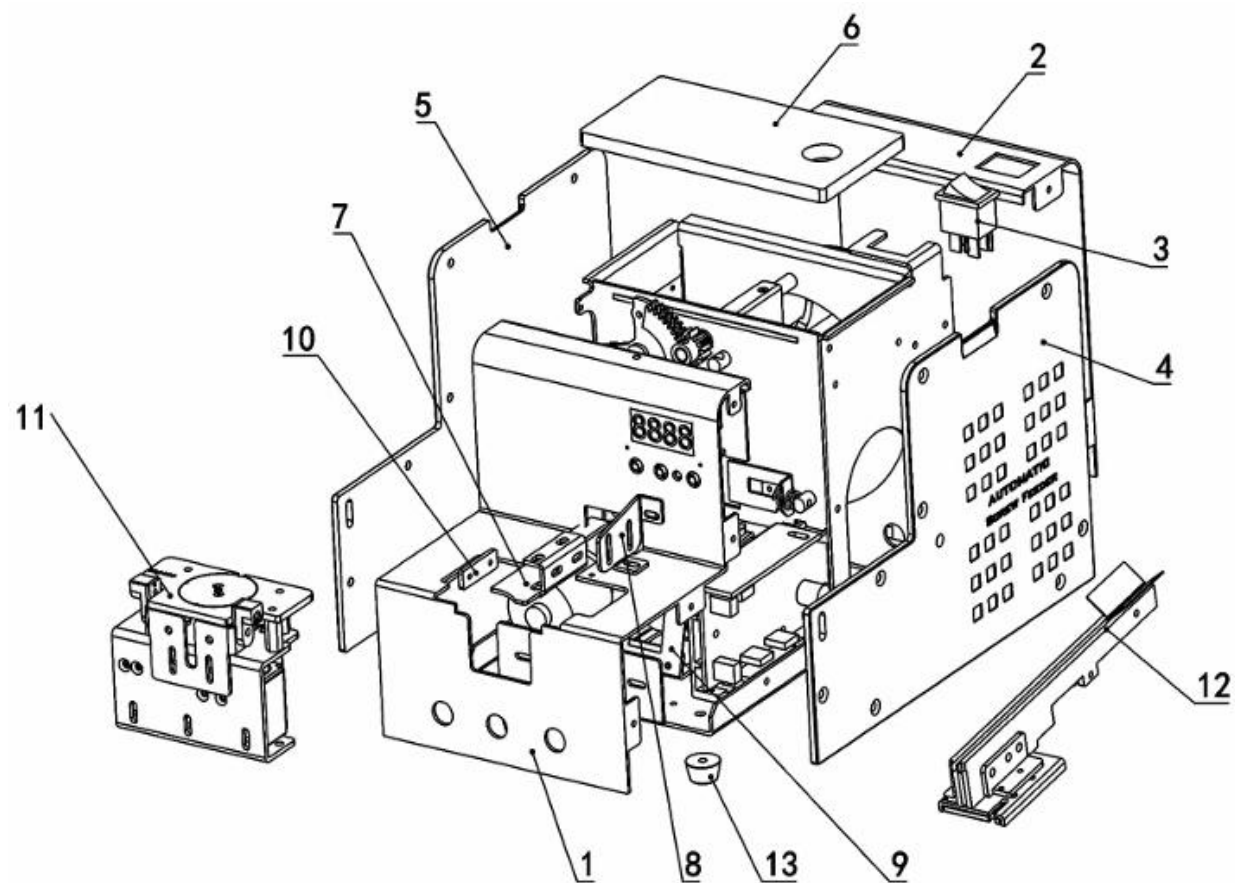
2.通过功能码a-xx降低轨道震动强度。

2.To address jams, the vibration intensity of the rail can be reduced using function code a-xx in the settings menu.



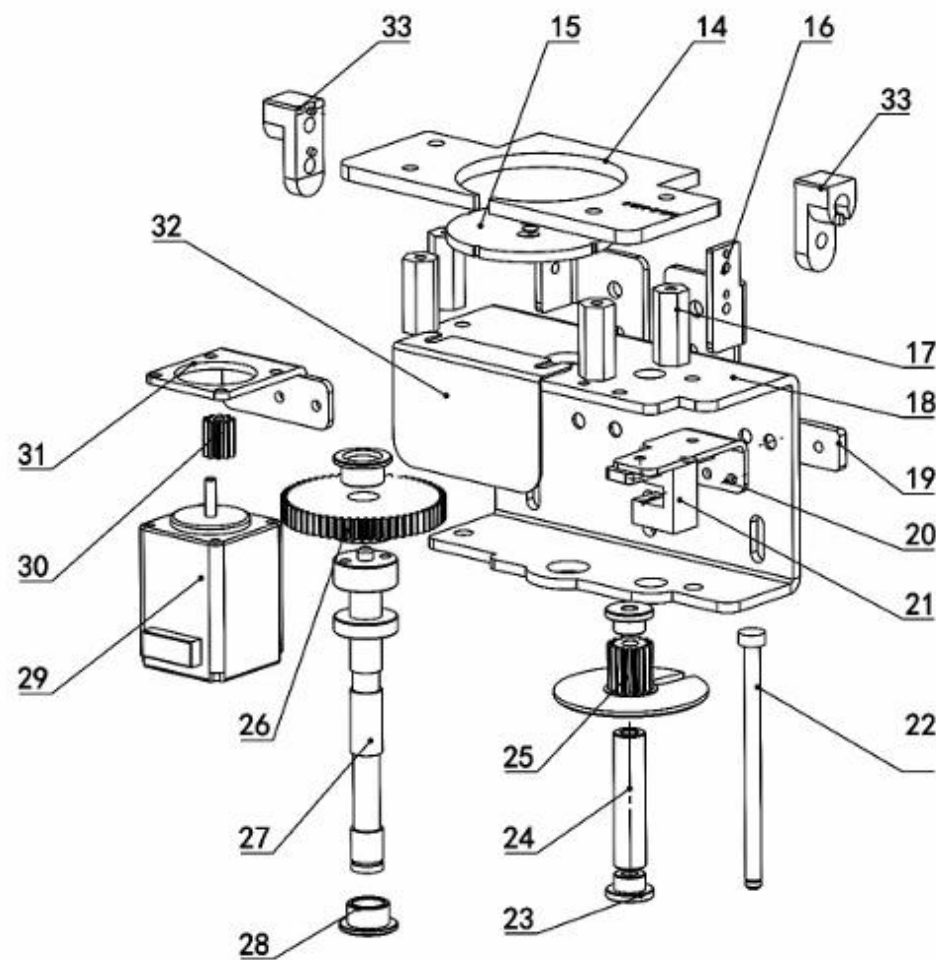
如右图二，E处两颗螺钉松开后，可上下调节转盘取料位螺丝检测传感器的，当遇到螺钉帽头较薄检测不准时，可适当调节。

As shown in D2 (referencing the accompanying diagram), after loosening the two screws at position E, the screw detection sensor's pick-up position on the rotary disc can be adjusted vertically (up and down). This adjustment is necessary to ensure accurate detection when dealing with screws that have thin or small heads that may not be detected reliably otherwise.



外部组件

External Components

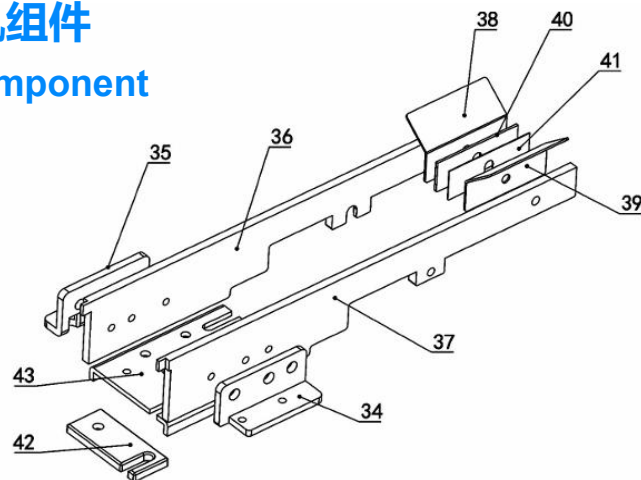
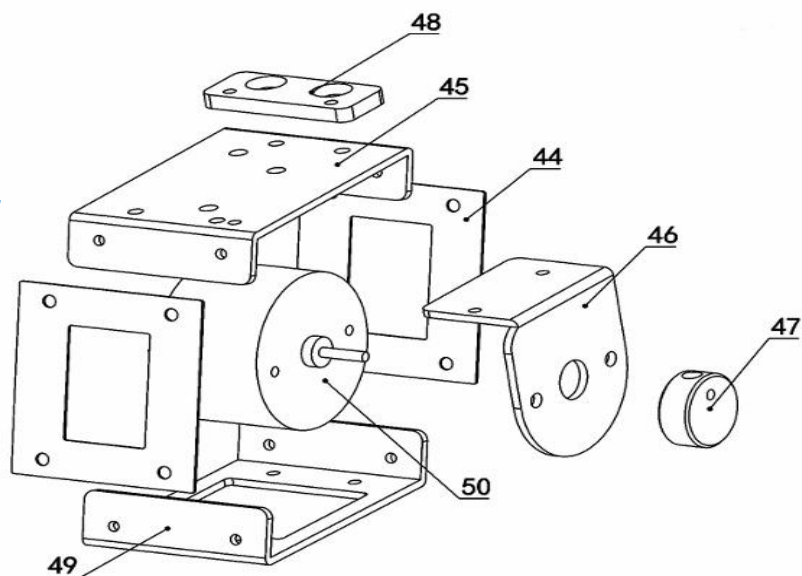
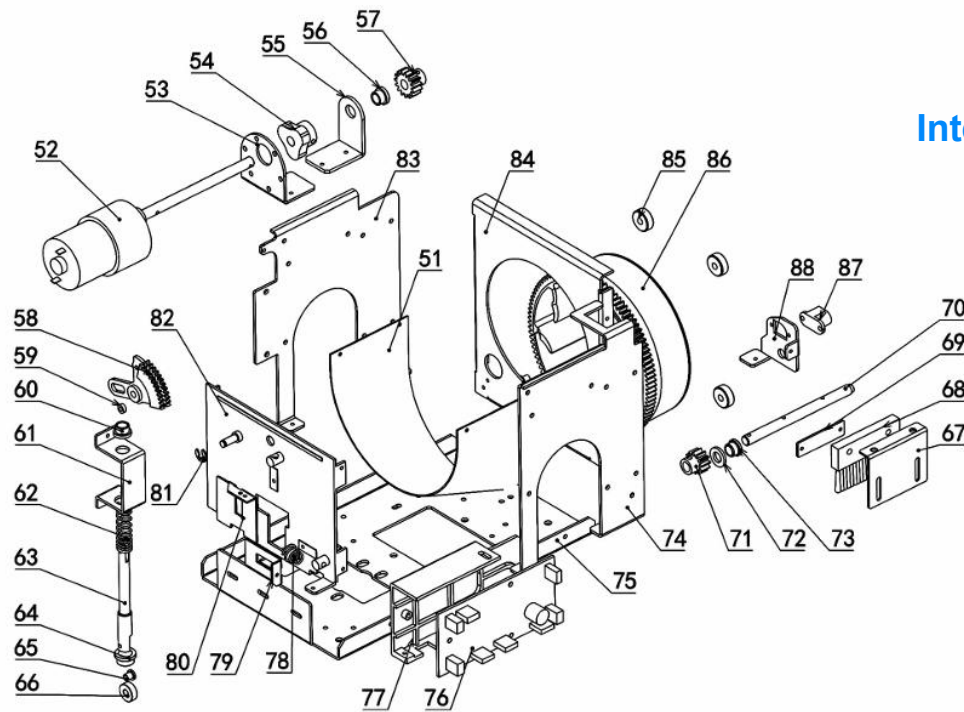


分料组件

Dispensing
Components

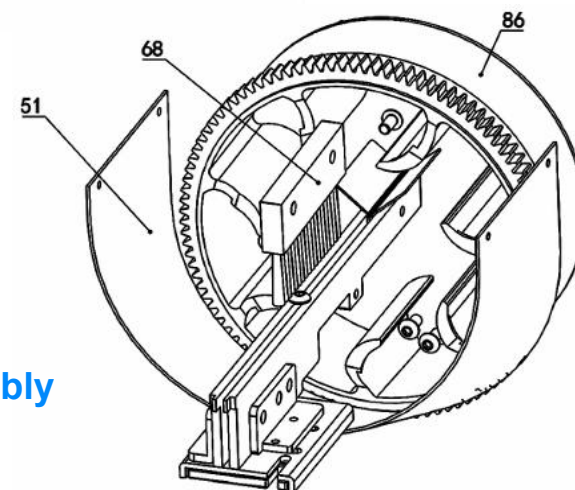
导轨组件

Rail Component

直振组件
Linear Feeder
Component

内部组件

Internal Components

上料组件
Feeding Assembly

序号	名称	序号	名称	序号	名称	序号	名称	序号	名称	序号	名称
1	前面罩	16	传感器支架	31	步进电机支架	46	振动电机支架	61	推杆支架	76	电路板
2	后面罩	17	等高柱	32	保护板	47	偏心轮	62	压簧	77	电路板支架
3	电源开关	18	大框架	33	对射传感器	48	导向块	63	推杆	78	塔簧
4	右面罩	19	锁片	34	导轨左固定块	49	直振下板	64	下推杆支架尼龙套	79	下挡料板
5	左面罩	20	光电传感器支架	35	导轨右固定块	50	振动电机	65	推杆轴承套	80	上挡料板
6	盖板	21	光电传感器	36	左导轨	51	料仓	66	推杆轴承	81	扇形齿安装卡簧
7	压板	22	定位齿轮轴	37	右导轨	52	减速电机	67	毛刷支架	82	前板
8	压板支架	23	滑动轴套	38	左导轨V型斗	53	减速电机支架	68	毛刷	83	左板
9	直振组件	24	滑动轴套	39	右导轨V型斗	54	凸轮	69	毛刷锁片	84	中板
10	压板锁片	25	转轮定位盘	40	调整片1.2mm	55	传动轴支架	70	毛刷摆动架	85	中板轴承
11	传动组件	26	大齿轮	41	调整片0.2mm	56	传动轴尼龙套	71	小齿轮	86	齿圈
12	导轨组件	27	大齿轮轴	42	导轨安装座垫片	57	小齿轮	72	平垫	87	DC插座
13	橡胶脚垫	28	滑动轴承	43	导轨安装座	58	扇形齿	73	前板尼龙套	88	DC支架
14	上板	29	步进电机	44	弹簧片	59	扇形齿衬套	74	右板		
15	转盘	30	齿轮	45	直振上板	60	上推杆支架尼龙套	75	底板		

No.	Name	No.	Name	No.	Name	No.	Name	No.	Name	No.	Name
1	Front Cover	16	Sensor Bracket	31	Stepper Motor Bracket	46	Vibration Motor Bracket	61	Pusher Rod Bracket	76	PCB Board
2	Rear Cover	17	Contour Columns	32	Protection Plate	47	Eccentric Wheel	62	Compression Spring	77	PCB Board Bracket
3	Power Switch	18	framework	33	Opposing Sensor	48	Guide Block	63	Pusher Rod	78	Spring
4	Right Cover	19	Locking Piece	34	Rail Fixing L Block	49	Linear Feeder Bottom Plate	64	Lower push rod bracket Nylon Sleeve	79	Lower Stopper Plate
5	Left Cover	20	Photoelectric Sensor Bracket	35	Rail Fixing R Block	50	Vibration Motor	65	Pusher Rod Bearing Sleeve	80	Upper Stopper Plate
6	Cover Plate	21	Photoelectric Sensor	36	Left Guide Rail	51	Hopper	66	Pusher Rod Bearing	81	Sector Gear Retaining Clip
7	Pressure Plate	22	Positioning gear shaft	37	Right Guide Rail	52	Gear Reduction Motor	67	Brush Bracket	82	Front Plate
8	Pressure Plate Bracket	23	Sliding Shaft Sleeve	38	Left Rail V-hopper	53	Gear Reduction Motor Bracket	68	Brush	83	Left Plate
9	Linear Vibrator	24	Sliding Shaft Sleeve	39	Right Rail V-hopper	54	Cam	69	Brush Locking Piece	84	Middle Plate
10	Pressure Plate Locking Piece	25	Rotary Disc Locating Plate	40	Adjustment Shim 1.2mm	55	Transmission Bracket	70	Brush Swing Frame	85	Middle Plate Bearing
11	Transmission components	26	Large Gear	41	Adjustment Shim 0.2mm	56	Transmission Shaft Nylon Sleeve	71	Small Gear	86	Gear ring
12	Guide Rail	27	Large Gear Shaft	42	Rail Mounting Seat Shim	57	Small Gear	72	Flat Washer	87	DC Socket
13	Rubber Foot Pad	28	Sliding Bearing	43	Rail Mounting Seat	58	Sector Gear	73	Front Plate Nylon Sleeve	88	DC Jack Bracket
14	Top Plate	29	Stepper Motor	44	Spring Plate	59	Fan-shaped tooth bushing	74	Right Plate		
15	Turntable	30	Gear	45	Linear Feeder Top Plate	60	Feeding Bracket Nylon Sleeve	75	Base Plate		

常见问题处理		
故障类型	原因	处理方法
螺丝机没电	1.电源线 2.开关环3.DC插座环	检查更新
电源灯亮机器不工作	1.出口感测器没对好位置或物品挡住 2.马达电源线断 3.螺丝机活动部件被卡住（偏心轮处，齿轮处）	1.检查或调整 2.重新焊接 3.清洁活动部件异物
料道卡螺丝 料仓漏螺丝	1.刷子高低、料道间隙、压板位置未调好 2.料仓挡板上下左右位置未调整好	1.检查后做相应调整 2.调整挡板位置
信号灯常亮	1.对射传感器环 2.传感器支架下沉	1.检查更新 2.检查后做相应调整
出口一直振动不停	1.直振送料延时太长 2.出口感应器位置不合适 3.螺丝尾部没有在感测器感测范围内	做相应调整
出螺丝太慢	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.轨道与前板处无间隙 6.振动电机与底板之间有异物	1.调整马达速度（SPEED） 2.调长送料供料延时 3.做相应调整 4.调整间隙（0.5-1毫米） 5.调整间隙（0.5-1毫米） 6.清除异物

供料器保养		
序号	保养部位或组件	保养内容
1	导轨	1.每隔15日用酒精擦拭导轨内侧面。 2.建议每隔两个月对导轨用退磁器进行退磁。
2	对射传感器	1.建议每隔半月对料满停机传感器用酒精擦拭清晰。
3	齿轮传动副	对齿轮传动副应每三个月加注润滑油。
4	传动杆滑动副	对传动杆滑动副应每三个月加注润滑油。
5	直振	每隔半年对直线输送器的所有螺钉检查有无松动并紧固。

随机配件			
序号	名称	数量	图片
1	电源适配器	1	
3	说明书	1	/
4	H2号调节扳手	1	

Common Problem Solving		
Fault Type	Cause	Handling Method
Screw Feeder Power Loss	1. Power cable disconnected. 2. Switch damaged. 3. DC socket poor contact.	Check and update
Power Light On, Machine Not Working	1. Exit sensor not correctly positioned, or an object is obstructing it. 2. Motor power cable disconnected. 3. Moving parts of the screw motor are jammed (eccentric wheel, gear).	1. Check or adjust. 2. Re-weld/re-solder. 3. Clean foreign matter from moving parts.
Rail Jams, Hopper Leaks Screws	1. Brush height, rail gap, or pressure plate position incorrectly set. 2. Hopper stopper plate position (up, down, left, right) not correctly adjusted.	1. Check and make corresponding adjustments. 2. Adjust stopper plate position.
Signal Light Stays On	1. Opposing sensor damaged/faulty. 2. Sensor bracket has sunken/dropped.	1. Check and replace/update. 2. Check and make corresponding adjustments.
Exit Vibrates Constantly	1. Linear feed delay time is too long. 2. Exit sensor position is incorrect. 3. Screw tail is outside the sensor detection range.	Make corresponding adjustments.
Slow Screw Output Speed A	1. Slow screw feeding speed/supply. 2. Short delay time. 3. Incorrect rail gap. 4. Pressure plate presses down on the rail. 5. No gap between the rail and the front component. 6. Foreign matter between the vibration motor and the base plate.	1. Adjust motor speed (SPEED). 2. Increase screw feeding delay time. 3. Adjust rail gap (0.5–1 mm). 4. Adjust rail gap (0.5–1 mm). 5. Adjust gap (0.5–1 mm). 6. Remove foreign matter.

Feeder Maintenance		
No.	Part/Component	Maintenance Content
1	Rail	1. Wipe the inside of the guide rail with alcohol every 15 days. 2. It is recommended to demagnetize the guide rail with a demagnetizer every two months.
2	Opposing Sensor	1. It is recommended to wipe the sensor of the screw feeder machine with alcohol every half month after stopping the machine.
3	Gear Transmission Pair	Add lubricating oil to the gear transmission pair every three months.
4	Transmission Rod Sliding Pair	Add lubricating oil to the transmission rod sliding pair every three months.
5	Linear Feeder	Check all screws on the linear conveyor for looseness and tighten them every half year.

Random Accessories			
No.	Name	Qty	Img
1	Power Adapter	1	
3	User Manual	1	/
4	H2 Adjustment Wrench	1	

感谢支持

Thanks for the support



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