

研发、生产、销售
R&D、Production、Sales

感谢阁下对弗里曼自动化的关注、关心、关爱与支持，弗里曼在内部管理上优化流程，降低管销成本，最大限度提供高性价比的自动化设备给客户，与客户一起成长。

期待能为阁下提供优质的服务!

Thank you for your attention, care, and support for Freeman Automation. By optimizing internal processes and reducing overhead costs, we deliver high-cost-performance automation solutions to our clients, growing together with them.

We look forward to providing you with excellent service!



Focusing on automated
winding equipment
专注于自动化绕线设备

苏州弗里曼自动化设备有限公司

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苏州弗里曼自动化设备有限公司
Suzhou Freeman Autolization & Equipment LTD. Co.



COMPANY

公司概况

PROFILE

苏州弗里曼设备有限公司，总部位于江苏省苏州市吴江区，是一家专注于自动化绕线设备研发、生产、销售及服务于一体的高新技术企业。公司拥有现代化的生产基地和专业的研发团队，致力于为全球电子制造行业提供高效、精密、稳定的绕线解决方案。弗里曼自动化拥有源自日本知名自动化公司的人才和多年自动化设备行业的技术精英。

Suzhou Freeman Equipment Co., Ltd. is headquartered in Wujiang District, Suzhou, Jiangsu Province. We are a high-tech enterprise specializing in the R&D, production, sales, and service of automated winding machines. With a modern production base and a professional R&D team, we are committed to providing the global electronics manufacturing industry with efficient, precise, and reliable winding solutions. Freeman Automation brings together technical experts with experience from renowned Japanese automation companies and years of expertise in the automation equipment industry.

FREEDOM

MAIN PRODUCT

主要产品

1

多轴高速自动绕线机的研发和生产

- ◎ 8轴高速自动绕线机（轴距82m/m）
- ◎ 12轴高速自动绕线机（轴距55m/m）

2

电子产品配套非标定制设备的研发与生产

- ◎ 全自动焊锡机
- ◎ 全自动磁芯组装机
- ◎ 全自动点胶设备
- ◎ 全自动测试包装机
- ◎ 全自动视觉检测设备

3

非标定制流水线的研发与生产

- ◎ 全自动焊锡机

4

配套设备的成套治具的研发与生产

1. R&D and Production of Multi-Axis High-Speed Automatic Winding Machines

- ◎ 8-Axis High-Speed Winding Machine (Axis Pitch: 82mm)
- ◎ 12-Axis High-Speed Winding Machine (Axis Pitch: 55mm)

2. R&D and Production of Customized Equipment for Electronics

- ◎ Fully Automatic Soldering Machine
- ◎ Fully Automatic Core Assembly Machine
- ◎ Fully Automatic Dispensing Equipment
- ◎ Fully Automatic Testing & Packaging Machine
- ◎ Fully Automatic Vision Inspection System

3. R&D and Production of Customized Production Lines

- ◎ Designed for labor-intensive manufacturing, replacing manual work with machines to enhance efficiency and ensure quality.

4. R&D and Production of Supporting Fixtures & Tooling

COMPANY PICTURE

公司图片



01

定位

Positioning

区域领先的自动化公司
Top Automation Company in the Region

02

理念

Philosophy

诚信，敬业，务实，创新
Integrity, Dedication, Pragmatism, Innovation

03

目标

Target

标准化，品牌化，专业化
Standardization, Branding, Specialization

04

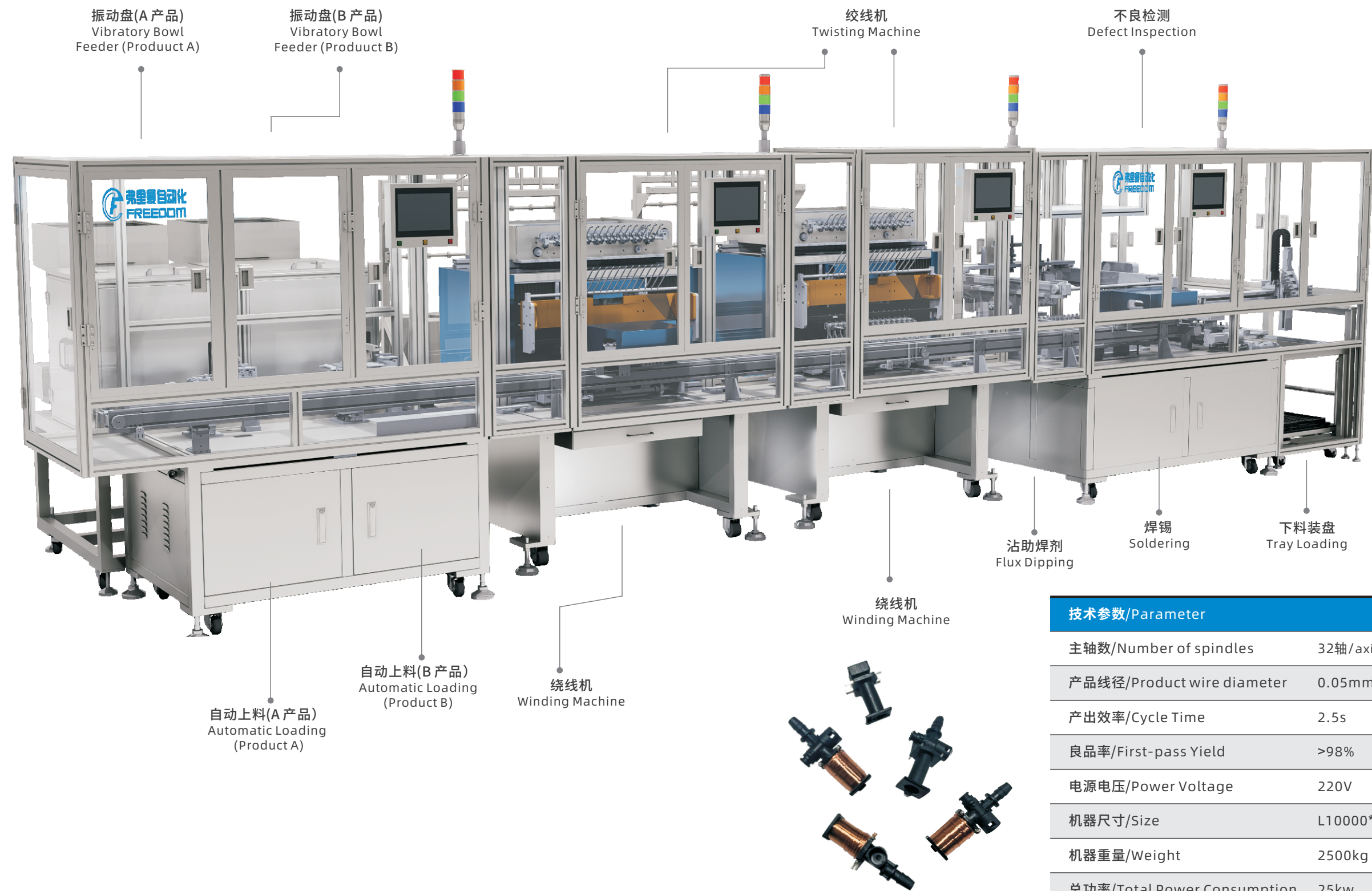
使命

Mission

成就客户，成就品牌，成就员工
Achieving Excellence:
For Clients, For Brand, For Team

Fully Automatic Winding Machine Production Line

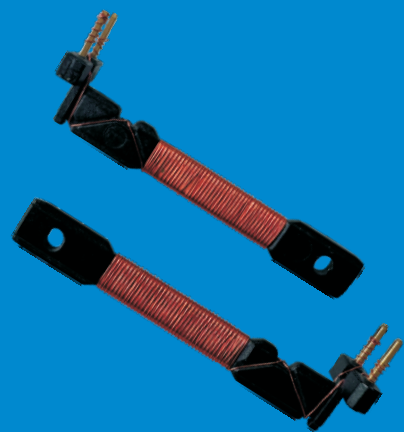
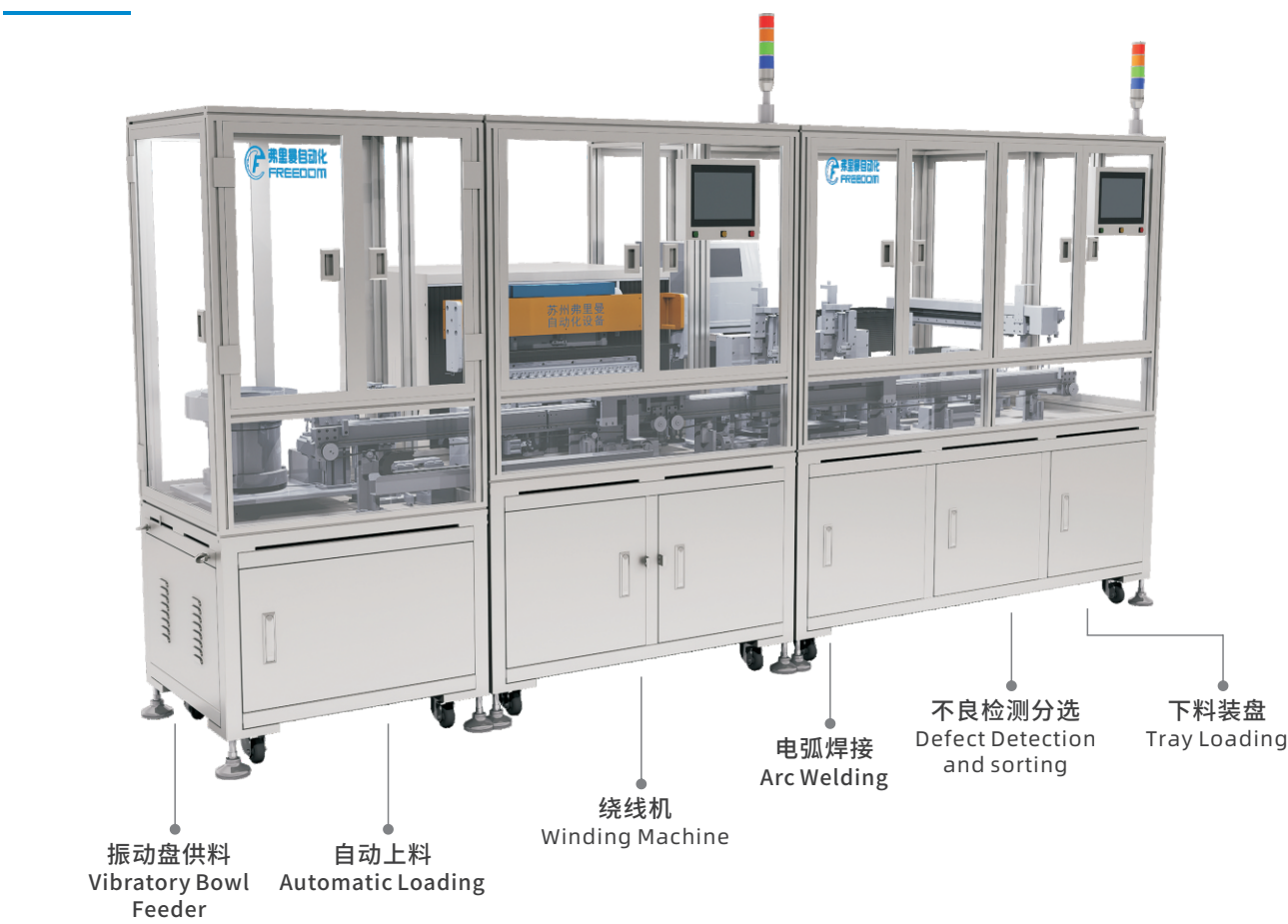
全自动绕线机线体



技术参数/Parameter	
主轴数/Number of spindles	32轴/axis
产品线径/Product wire diameter	0.05mm
产出效率/Cycle Time	2.5s
良品率/First-pass Yield	>98%
电源电压/Power Voltage	220V
机器尺寸/Size	L10000*W1200*H2000mm
机器重量/Weight	2500kg
总功率/Total Power Consumption	25kw

Fully Automatic Winding Machine Production Line

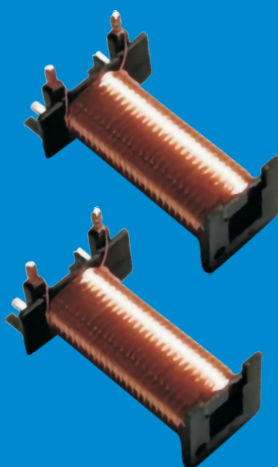
全自动绕线机线体



技术参数/Parameter	
主轴数/Number of spindles	20轴/axis
产品线径/Product wire diameter	0.02-0.4mm
产出效率/Cycle Time	2.5s
良品率/First-pass Yield	>98%
电源电压/Power Voltage	220V
机器尺寸/Size	L5300*W1200*H2000mm
机器重量/Weight	2200kg
总功率/Total Power Consumption	17kw

Fully Automatic Winding Machine Production Line

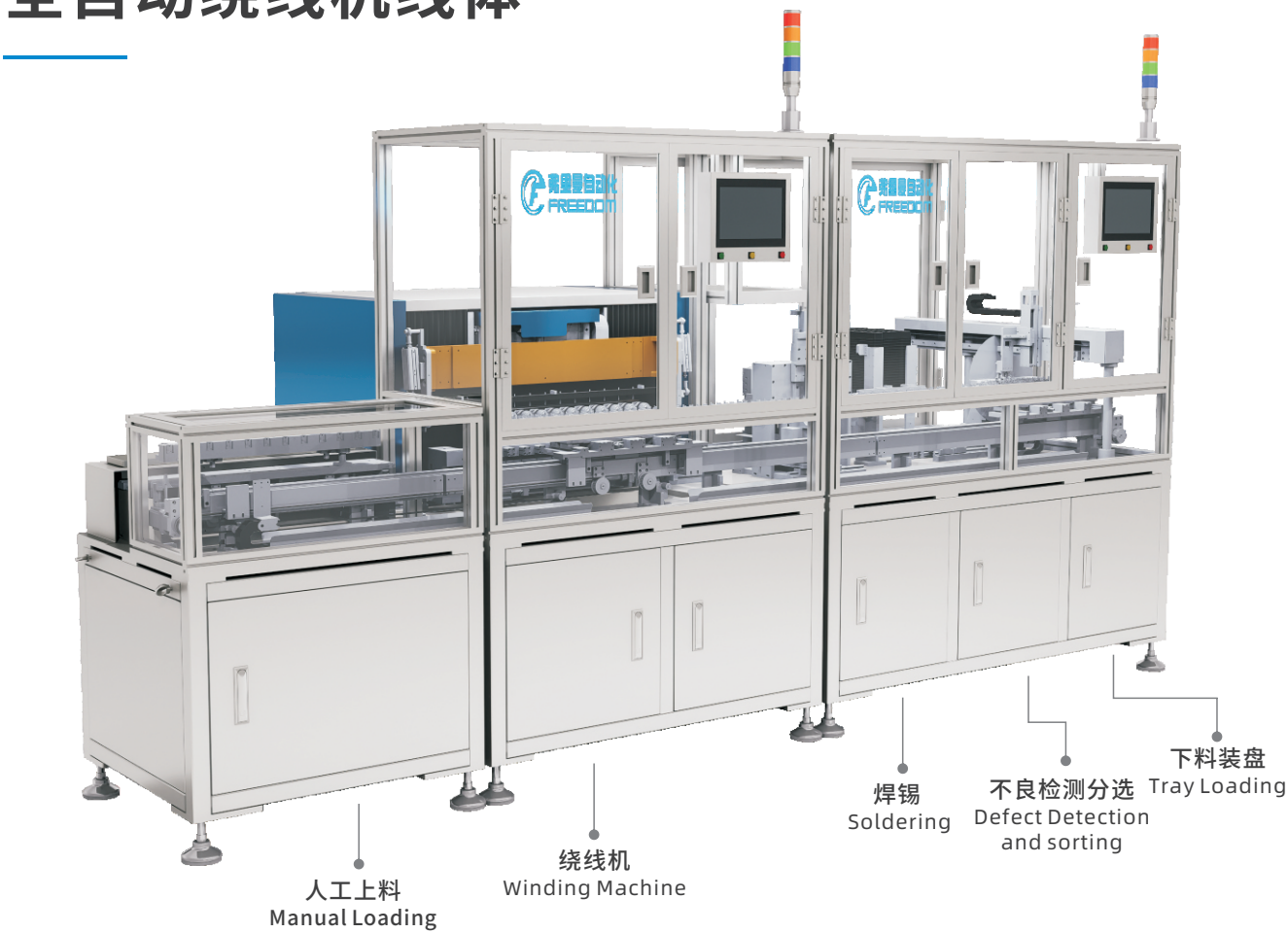
全自动绕线机线体



技术参数/Parameter	
主轴数/Number of spindles	10轴/axis
产品线径/Product wire diameter	0.02-0.4mm
产出效率/Cycle Time	3.5s
良品率/First-pass Yield	>98%
电源电压/Power Voltage	220V
机器尺寸/Size	L5000*W1200*H2000mm
机器重量/Weight	2500kg
总功率/Total Power Consumption	15kw

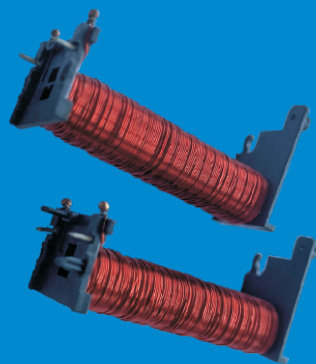
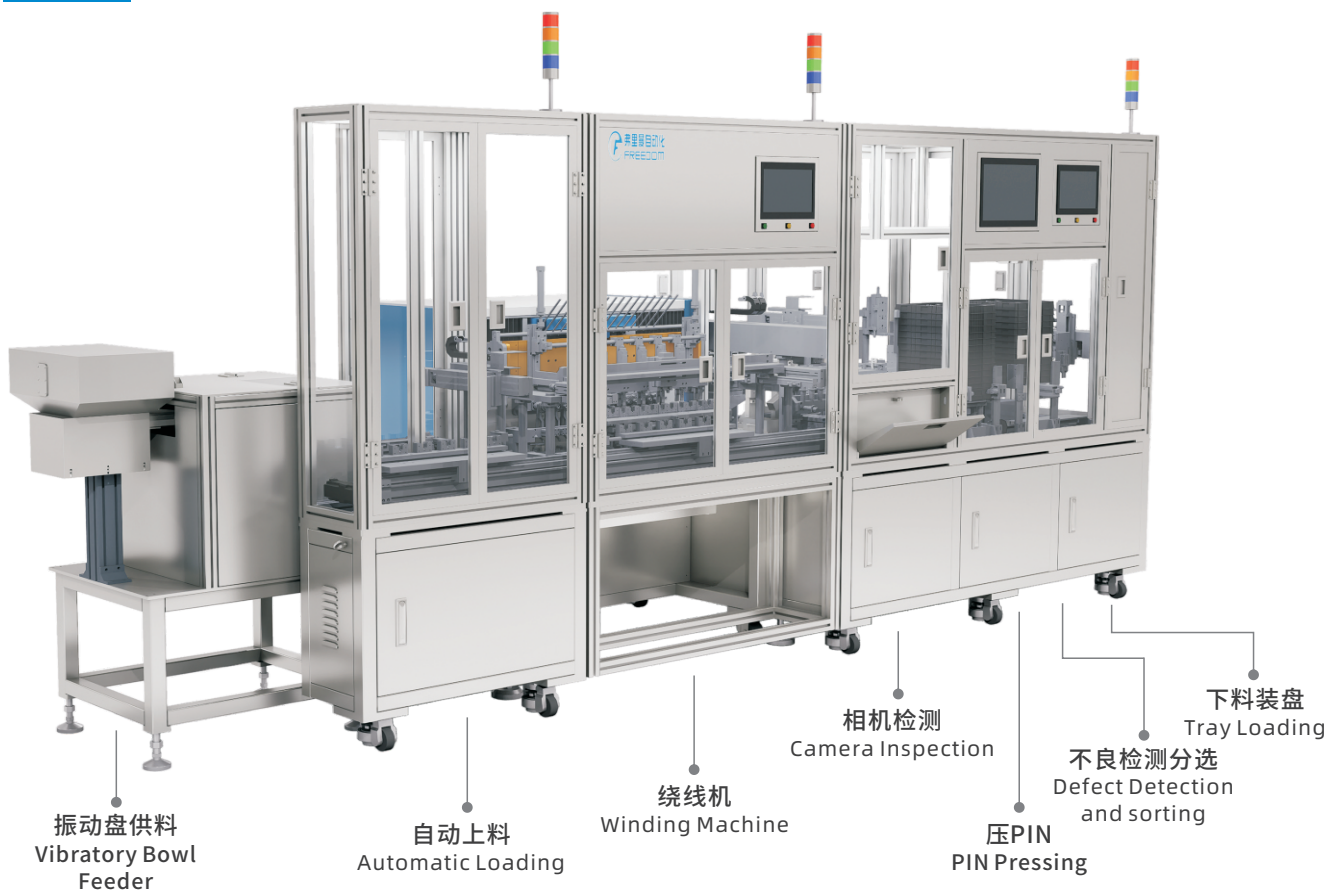
Fully Automatic Winding Machine Production Line

全自动绕线机线体



Fully Automatic Winding Machine Production Line

全自动绕线机线体



技术参数/Parameter	
主轴数/Number of spindles	12轴/axis
产品线径/Product wire diameter	0.02-0.4mm
产出效率/Cycle Time	7s
良品率/First-pass Yield	>98%
电源电压/Power Voltage	220V
机器尺寸/Size	L5000*W1200*H1900mm
机器重量/Weight	2500kg
总功率/Total Power Consumption	13kw



技术参数/Parameter	
主轴数/Number of spindles	6轴/axis
产品线径/Product wire diameter	0.02-0.4mm
产出效率/Cycle Time	10s
良品率/First-pass Yield	>99%
电源电压/Power Voltage	220V
机器尺寸/Size	L5000*W1200*H1900mm
机器重量/Weight	3000kg
总功率/Total Power Consumption	15kw

Fully Automatic Winding Machine

全自动绕线机 (FLM-6612)

- 01 模块化结构便于扩展和升级:可根据需求选择不同的选配机构，以完成复杂多样的绕制要求。亦方便以后设备的升级。
- 02 适合两种线径轮流绕制:可通过增加特殊机构实现两种线径轮流绕制。
- 03 适合粗线径、大骨架产品绕制:针对变压器的较粗线径和较大骨架而特殊设计稳固机身和配置大功率执行机构。
- 04 无挡墙、无套管骨架类高低频变压器(单绕组多层绕线，需层间绝缘)。

- 01 Modular design for easy expansion and upgrades: Different optional mechanisms can be selected as needed to meet diverse and complex winding requirements. It also facilitates future equipment upgrades.
- 02 Supports alternating winding of two wire gauges: By adding a special mechanism, the machine can alternate between two different wire diameters.
- 03 Suitable for thick wires and large bobbins: Designed with a sturdy frame and high-power actuators specifically for winding thicker wires and larger transformer bobbins.
- 04 Supports wall-less and sleeveless bobbins for high/low-frequency transformers (single-winding, multi-layer winding with interlayer insulation).

配置标准 Standard Configuration

系统/机构/System/mechanism	机构特性/Institutional characteristics
控制系统 Control System	自主研发控制器，高速响应，高可靠性，特别针对工作效率进行优化，日本松下伺服电机及驱动器，高速响应、高准确性。 Independently developed controller, with high-speed response and high reliability optimized specifically for work efficiency, Panasonic servo motor and driver, with high-speed response and high accuracy.
伺服系统 Server System	触摸屏编程界面简单易学。 The touchscreen programming interface is intuitive and easy to learn
执行机构 Executive Agency	SMC原装器件，高稳定性、高准确性。 SMC original components with high stability and accuracy.
导轨丝杆 Rail & Screw	台湾知名品牌的导轨和丝杆，高精度、高可靠性。 The guide rails and screw rods of well-known brands in Taiwan are high-precision and highly reliable.
主机机身 Host Body	一体式铸件，机身坚固，稳定性好、抗震性好。 Integrated casting, sturdy body, good stability, and seismic resistance.
主轴承箱 Main Bearing Housing	一体式主轴承箱，精确的同心度、低噪音、低发热。 Integrated main bearing box, precise concentricity, low noise, and low heat generation.

可选配机构 Optional Mechanism

1. 包胶机构 Tape wrapping mechanism	4. 压线机构 Wire pressing mechanism
2. 绞线机构 Twisted wire mechanism	5. 张力衰减机构 Tension attenuation mechanism
3. 气动剪刀 Pneumatic Shear	6. 双线绕轮机构 Double line wheel winding mechanism

技术参数 Technical Parameter

型号/Model	FLM-6608	FLM-6612	FLM-6616
主轴数/Number of spindles	8 轴/axis	12 轴/axis	16 轴/axis
主轴间距/Distance Between Spindles	90mm	55mm	37mm
最大线圈外径/Max Coil Outer Diameter	70mm	40mm	25mm
最高转速/Max. Speed	15000rpm	15000rpm	15000rpm
AC伺服马达/AC Servo Motor	主轴 Spindle: 750W 主轴 Spindle: 1500W 主轴 Spindle: 1500W		
	X轴 Axis: 400W	X轴 Axis: 400W	X轴 Axis: 400W
	Y轴 Axis: 400W	Y轴 Axis: 400W	Y轴 Axis: 400W
	Z轴 Axis: 400W	Z轴 Axis: 400W	Z轴 Axis: 400W
轴停精度/Axis Stop Accuracy	±0.5°		
适用线径/Applicable Wire Diameter	0.02-0.6mm	0.02-0.4mm	0.02-0.4mm
最大幅宽/Max. Winding Width	150mm		
导针移动轴速度/Guide Needle Axis Movement Speed	250mm/sec		
导针缠脚角度/Guide Needle Foot Wrapping Angle	0°,90°,-45°		
缠脚速度/Guide Needle Foot Wrapping Speed	Max 150rpm		
压缩空气压力/Compressed Air Pressure	0.6-0.8MPa		
电源电压/Power Supply Voltage	220V		
功率/Power	2.5kw	4.5kw	4.5kw
机器尺寸/Size	L1200*W1200*H1400mm		
机器重量/Weight	700kg	750kg	800kg



Fully Automatic Winding Machine with Tape Wrapping Function

全自动绕线带包胶机 (FLM-6612-BJ)

01 全自动绕线带包胶机集成绕线与包胶工艺于一体，实现线圈绕制与绝缘处理的全程自动化，特别适用于需要绝缘保护的精密线圈制造。

01 Fully Automatic Winding Machine with Tape Wrapping Function integrates winding and tape-wrapping processes into one system, achieving full automation from coil formation to insulation treatment, making it particularly suitable for precision coil manufacturing requiring insulation protection.

标配项目 Standard configuration items

1. 绕线机 Winding Machine	4. 线筒一套(按轴数1:1配置) Wire Spool Assembly (1:1 per axis)
2. 夹具和自动上下料治具、机构一套 Complete set of:Clamping fixtures, Automated loading/unloading jigs & mechanism assembly	5. 导针一套(按轴数1:1配置) Guide needle sets (1:1 per axis)
3. 线架一套(按轴数1:1配置) Wire guide frames (1:1 configuration per axis)	6. 张力器(按轴数1:1配置) Tensioners (one per axis)

技术参数 Technical Parameter

型号/Model	FLM-6608-BJ	FLM-6612-BJ	FLM-6616-BJ
主轴数/Number of spindles	8 轴/axis	12 轴/axis	16 轴/axis
主轴间距/Distance Between Spindles	90mm	55mm	37mm
最大线圈外径/Max Coil Outer Diameter	70mm	40mm	25mm
最高转速/Max. Speed	15000rpm	15000rpm	15000rpm
AC伺服马达/AC Servo Motor	主轴 Spindle: 750W 主轴 Spindle: 1500W 主轴 Spindle: 1500W		
	X轴 Axis: 400W	X轴 Axis: 400W	X轴 Axis: 400W
	Y轴 Axis: 400W	Y轴 Axis: 400W	Y轴 Axis: 400W
	Z轴 Axis: 400W	Z轴 Axis: 400W	Z轴 Axis: 400W
轴停精度/Axis Stop Accuracy	±0.1°		
适用线径/Applicable Wire Diameter	0.02-0.6mm	0.02-0.4mm	0.02-0.4mm
最大幅宽/Max. Winding Width	150mm		
	X:150mm		
	X:100mm		
导针移动轴速度/Guide Needle Axis Movement Speed	X:150mm		
导针移动轴速度/Guide Needle Axis Movement Speed	X:100mm		
导针移动轴速度/Guide Needle Axis Movement Speed	250mm/sec		
导针缠脚角度/Guide Needle Foot Wrapping Angle	0°,90°,- 45°		
缠脚速度/Guide Needle Foot Wrapping Speed	Max 150rpm		
压缩空气压力/Compressed Air Pressure	0.6-0.8MPa		
电源电压/Power Supply Voltage	220V		
功率/Power	3.0kw	4.8kw	4.8kw
机器尺寸/Size	L1200*W1200*H1400mm		
机器重量/Weight	730kg	800kg	820kg



Fully Automatic Winding & Twisting Machine

全自动绕线带绞线机 (FLM-6612-JX)

01 全自动绕线带绞线机集成绕线与绞线工艺于一体，实现线圈绕制与极细线绞线处理的全程自动化，特别适用于需要产品线径细的精密线圈制造。

01 Fully Automatic Winding & Twisting Machine Integrates winding and twisting processes into one system, enabling complete automation from coil formation to ultra-fine wire twisting. Specifically designed for precision coil manufacturing requiring micro-diameter conductors.

标配项目 Standard configuration items

1. 绕线机
Winding Machine

2. 夹具和自动上下料治具、机构一套
Complete set of:Clamping fixtures, Automated loading/unloading jigs & mechanism assembly

3. 线架一套(按轴数1:1配置)
Wire guide frames (1:1 configuration per axis)

4. 线筒一套(按轴数1:1配置)
Wire Spool Assembly (1:1 per axis)

5. 导针一套(按轴数1:1配置)
Guide needle sets (1:1 per axis)

6. 张力器(按轴数1:1配置)
Tensioners (one per axis)

7. 绞线机
Twisted Wire Machine

技术参数 Technical Parameter

型号/Model	FLM-6608-JX	FLM-6612-JX	FLM-6616-JX
主轴数/Number of spindles	8 轴/axis	12 轴/axis	16 轴/axis
主轴间距/Distance Between Spindles	90mm	55mm	37mm
最大线圈外径/Max Coil Outer Diameter	70mm	40mm	25mm
最高转速/Max. Speed	15000rpm	15000rpm	15000rpm
AC伺服马达/AC Servo Motor	主轴 Spindle: 750W 主轴 Spindle: 1500W 主轴 Spindle: 1500W		
	X轴 Axis: 400W	X轴 Axis: 400W	X轴 Axis: 400W
	Y轴 Axis: 400W	Y轴 Axis: 400W	Y轴 Axis: 400W
	Z轴 Axis: 400W	Z轴 Axis: 400W	Z轴 Axis: 400W
轴停精度/Axis Stop Accuracy	±0.5°		
适用线径/Applicable Wire Diameter	0.02-0.6mm	0.02-0.4mm	0.02-0.4mm
最大幅宽/Max. Winding Width	150mm		
	X:150mm		
	Y:150mm		
导针移动量/Guide Needle Axis Movement Range	Z:100mm		
导针移动轴速度/Guide Needle Axis Movement Speed	250mm/sec		
导针缠脚角度/Guide Needle Foot Wrapping Angle	0°,90°,- 45°		
缠脚速度/Guide Needle Foot Wrapping Speed	Max 150rpm		
绞线长度/Twisting Length	Max. 900mm		
绞线股数/Intermal Wiring	3,5,7...		
绞线速度/Twisting Speed	Max 4000rpm		
编程界面/Programming Interface	触摸屏/The touchscreen		
编程方式/Programming method	触摸屏界面/The touchscreen programming		
压缩空气压力/Compressed Air Pressure	0.6-0.8MPa		
电源电压/Power Supply Voltage	220V		
功率/Power	3.1kw	4.6kw	4.6kw
机器尺寸/Size	L1200*W1200*H1400mm		
机器重量/Weight	720kg	770kg	790kg

选配项目 Optional items

1. 气动剪刀
Pneumatic Shear

2. 刀片
Blade Set

3. 双线轮绕机构
Dual-wire Winding Mechanism

4. 压线机构
Wire Crimping Unit

5. 张力衰减机构
Tension Attenuation Device

Hollow Coil Winding Machine

空心线圈绕线机(FLM-KS)



本设备是专为空心线圈制造研发的高端自动化装备，通过创新的无芯绕制技术和智能控制系统，实现高精度、高效率的空心线圈生产，满足航空航天、医疗设备、5G通信等高端领域的严苛要求。

This advanced automated system is specifically engineered for hollow coil manufacturing, incorporating innovative coreless winding technology and intelligent control systems to achieve high-precision, high-efficiency production of hollow coils. It meets the stringent requirements of cutting-edge industries including aerospace, medical devices, and 5G communications.

技术参数 Technical Parameter

型号/Model	FLM-KS-0001	FLM-KS-0002
主轴数/Number of spindles	1轴/axis	2轴/axis
适用线径/Applicable wire diameter	0.02-1.5mm	0.02-1.5mm
最大线圈外径/Max Coil Outer Diameter	240mm	240mm
最高转速/Max. Speed	3000rpm	3000rpm
最大幅宽/Max. Winding Width	100mm	100mm
电源电压/Power Voltage	220V	220V
机器尺寸/Size	L1350*W850*H2300mm	L1200*W1200*H2300mm
机器重量/Weight	550kg	680kg

High-Torque Winding Machine

大扭力绕线机 (FLM-DNL-0001)



本设备专为大线径、高张力绕线需求设计，可稳定处理 $\phi 0.2\text{mm}$ ~ 3.5mm 线材，满足工业电机、新能源驱动系统、重型变压器等高负载绕线场景的严苛要求。

This equipment is specifically designed for large-diameter, high-tension winding applications, capable of reliably processing wires ranging from $\phi 0.2\text{mm}$ to 3.5mm . It meets the stringent requirements of high-load winding scenarios such as industrial motors, new energy drive systems, and heavy-duty transformers.

技术参数 Technical Parameter

型号/Model	FLM-DNL-0001
主轴数/Number of spindles	1轴/axis
适用线径/Applicable wire diameter	0.2-3.5mm
最大线圈外径/Max Coil Outer Diameter	240mm
最高转速/Max. Speed	2000rpm
最大幅宽/Max. Winding Width	350mm
电源电压/Power Voltage	220V
机器尺寸/Size	L1200*W1200*H1400mm
机器重量/Weight	150kg

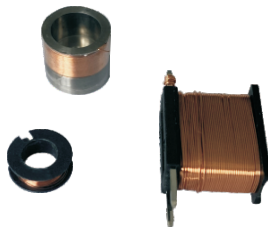
Bench-Type Precision Wire Winding Machine

机台式精密排线绕线机(FLM-BTPW-0001)



机台式精密排线绕线机是一种专用于高精度线圈制造的设备，通常采用伺服驱动和数控系统，适用于变压器、电感、电机绕组等精密电子元件的自动化绕制。其主要特点包括：高精度排线，模块化设计和智能化控制。

Bench-type precision wire winding machine is specialized equipment for high-precision coil manufacturing, typically employing servo drives and CNC systems. It is designed for automated winding of precision electronic components such as transformers, inductors, and motor windings. Key features include: High-precision wire laying, Modular design and Intelligent control.

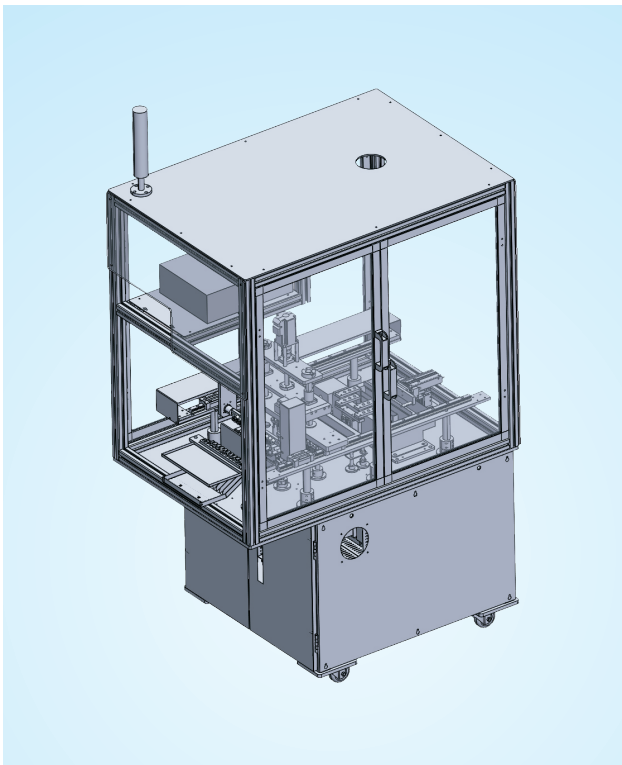


技术参数 Technical Parameter

型号/Model	FLM-BTPW-0001
主轴数/Number of spindles	1轴/axis
适用线径/Applicable wire diameter	0.02-0.6mm
最高转速/Max. Speed	3000rpm
最大幅宽/Max.Winding Width	150mm
电源电压/Power Voltage	220V
机器尺寸/Size	L750*W900*H1200mm
机器重量/Weight	150kg

Fully Automatic Soldering Machine

全自动焊锡机(FLM-HX-0001)



全自动浸锡机是一种用于电子制造行业的自动化焊接设备，主要用于变压器、电感、滤波器等电子元器件的批量浸锡焊接。相比传统手工焊接，全自动浸锡机具有效率高、焊点质量稳定、节省人力等优势，广泛应用于电子制造、汽车电子、通信设备等领域。

Fully automatic soldering machine is an automated welding device used in the electronics manufacturing industry, primarily for batch soldering of components such as transformers, inductors, and filters, Compared to traditional manual soldering, it offers higher efficiency, consistent solder joint quality, and reduced labor costs, making it widely applicable in electronics manufacturing, automotive electronics, telecommunications equipment, and related fields.

技术参数 Technical Parameter

型号/Model	FLM-HX-0001
镀锡速度/Tin Plating Speed	250mm/sec
最高温度/Max.Temperature	600℃
电源电压/Power Voltage	220V
机器尺寸/Size	L1110*W770*H1980mm
机器重量/Weight	200kg

Four-Axis High-Torque Winding Machine with Wide Spacing

四轴大间距大扭力绕线机（FLM-DJJ-9004）



本设备采用四轴同步驱动系统，配备大间距绕线模组及高扭矩输出机构，专为大尺寸线圈、高张力绕线需求设计，适用于新能源电机、工业变压器、特种设备等领域的重型线圈制造。

This equipment incorporates a quad-axis synchronous drive system with wide-spacing winding modules and high-torque output mechanisms, specifically engineered for large-dimension coil fabrication under high tension. Designed for heavy-duty coil production in new energy motors, industrial transformers, and special equipment applications.



技术参数 Technical Parameter

型号/Model	FLM-DJJ-9004
主轴数/Number of spindles	4轴/axis
适用线径/Applicable wire diameter	0.02-0.6mm
最大线圈外径/Max Coil Outer Diameter	240mm
最高转速/Max. Speed	3000rpm
电源电压/Power Voltage	220V
机器尺寸/Size	L1200*W1200*H1400mm
机器重量/Weight	200kg

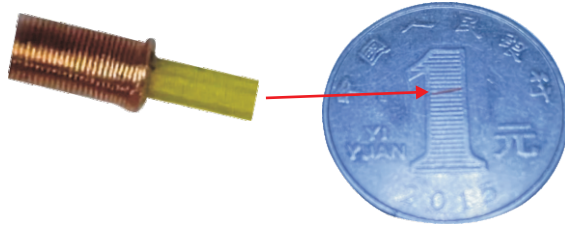
Enclosed Precision Wire-Winding Machine

箱式精密排线绕线机 (FLM-EPW-0001)



本设备是专为高精度精密线圈制造研发的尖端自动化设备，采用多轴联动控制和智能排线算法，实现微米级精度的线材排列与绕制，满足医疗设备、精密仪器、航空航天等领域对超精细线圈的严苛要求。

Engineered specifically for high-accuracy precision coil manufacturing, this cutting-edge automated equipment utilizes multi-axis synchronous control and intelligent wire arrangement algorithms to achieve micron-level precision in wire placement and winding. Designed to meet the stringent requirements of medical devices, precision instruments, aerospace applications and other industries demanding ultra-fine coil specifications.



技术参数 Technical Parameter

型号/Model	FLM-EPW-0001
主轴数/Number of spindles	1轴/axis
适用线径/Applicable wire diameter	0.02-0.6mm
最高转速/Max. Speed	3000rpm
最大幅宽/Max. Winding Width	50mm
电源电压/Power Voltage	220V
机器尺寸/Size	L550*W330*H500mm
机器重量/Weight	30kg

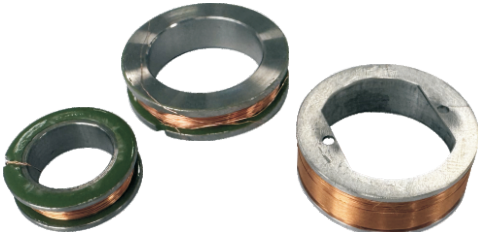
Precision Wire-Winding Machine

精密排线绕线机 (FLM-PW-0001)



本设备是专为高精度线圈制造研发的尖端自动化设备，采用智能排线算法，实现微米级精度的线材排列与绕制，满足医疗设备、精密仪器、航空航天等领域对超精细线圈的严苛要求。

Engineered specifically for high-accuracy coil manufacturing, this cutting-edge automated equipment utilizes intelligent wire arrangement algorithms to achieve micron-level precision in wire placement and winding. Designed to meet the stringent requirements of medical devices, precision instruments, aerospace applications and other industries demanding ultra-fine coil specifications.



技术参数 Technical Parameter

型号/Model	FLM-PW-0001
主轴数/Number of spindles	1轴/axis
适用线径/Applicable wire diameter	0.02-0.6mm
最高转速/Max. Speed	3000rpm
最大幅宽/Max. Winding Width	150mm
电源电压/Power Voltage	220V
机器尺寸/Size	L750*W650*H550mm
机器重量/Weight	50kg

Semi-Automatic 4-Axis Winding Machine

半自动四轴绕线机 (FLM-CNC-1204)



广泛应用于EI变压器、高频变压器、脉冲变压器继电器，电感线圈，精密线圈、高压线包、电源适配器、安定器等产品。

- 1.采用CNC控制器；
- 2.交流电机与步进电机精密运动执行；
- 3.外部可接多路功能控制，应用稳定、资料教导式键入、操作简单易学；
- 4.设备维护方便，采用进口配件；
- 5.流程品质控制，设备稳定可靠；
- 6.根据需要更改程式实现多功能。

Widely used in EI transformers, high-frequency transformers, pulse transformers, relays, inductor coils, precision coils, high-voltage windings, power adapters, and ballasts.

- 1.CNC-controlled with precision motion execution via AC servo & stepper motors.
- 2.Multi-functional I/O ports for external control integration.
- 3.User-friendly teach-in programming for simplified operation.
- 4.Easy maintenance with imported critical components.
- 5.Stable performance ensured by process quality control.
- 6.Flexible programmability for multi-process adaptation.



技术参数 Technical Parameter

型号/Model	FLM-CNC-1204
主轴数/Number of spindles	4轴/axis
适用线径/Applicable wire diameter	0.02-0.6mm
最高转速/Max. Speed	6000rpm
主轴电机功率/Main Motor Power	370W
最大幅宽/Max. Winding Width	70mm
电源电压/Power Voltage	220V
机器尺寸/Size	L1000*W680*H1000mm
机器重量/Weight	90kg

Semi-Automatic Winding Machine

半自动大扭力绕线机（FLM-CNC-DNL-0001）



本设备是专为中小批量线圈生产设计的半自动化绕线解决方案，结合人工上下料与自动绕线工艺，在保证精度的同时提供灵活的生产模式，适用于样品试制、多品种小批量订单等场景。

This equipment is a semi-automatic winding solution specifically designed for the production of small and medium batches of coils. By combining manual loading and unloading with automatic winding processes, it ensures precision while providing a flexible production mode. It is suitable for scenarios such as sample prototyping and small batch orders of multiple varieties.

技术参数 Technical Parameter

型号/Model	FLM-CNC-DNL-0001
主轴数/Number of spindles	1轴/axis
适用线径/Applicable wire diameter	0.08-3.0mm
最高转速/Max. Speed	3000rpm
最大幅宽/Max. Winding Width	120mm
电源电压/Power Voltage	220V
机器尺寸/Size	L1000*W680*H450mm
机器重量/Weight	80kg

Transformer Silicon Steel Sheet Lamination Processing Equipment

变压器矽钢片整形设备（FLM-TL-0001）



本设备是专为变压器铁芯矽钢片设计的高精度整形系统，通过多工位自动化加工，实现矽钢片的剪切、冲压、叠装一体化处理，大幅提升变压器铁芯的磁导率与能效表现。

Engineered specifically for transformer core laminations, this high-precision automated system performs integrated cutting, stamping, and stacking processes through multi-station processing, significantly enhancing core permeability and energy efficiency performance.

Fully Automatic Impregnation Machine

全自动含浸机（FLM-IM-1001）



本设备是专为电机、变压器、电感等电子元件的绝缘漆真空含浸工艺设计的自动化系统，通过智能真空压力控制和精准滴漆技术，实现高效、均匀的绝缘处理，显著提升产品的电气性能与可靠性。

Designed specifically for insulating varnish treatment of motors, transformers, and inductors, this automated equipment utilizes intelligent vacuum-pressure control and precision resin-dispensing technology to deliver efficient, uniform insulation coating, significantly enhancing electrical performance and product reliability.

Coil Tape-Wrapping Machine

线圈包胶机



- 1.三种包胶力矩模式选择，速度可随意设置，效益最大化；

2.FLASH储存，无资料丢失故障；

3.可自动包胶，自动切胶，作业性佳；

4.兼具包线图兼绝缘粉芯胶带双层功能；

5.步进电机驱动，扭矩大。
- 1.There are three types of adhesive torque modes to choose from, and the speed can be set freely to maximize efficiency.

2.FLASH storage, no data loss fault.

3.It can automatically wrap and cut materials with excellent work ability.

4.It also has a dual layer function of wrapping coils and insulating powder core tape.

5.Stepper motor drive with high torque.

技术参数 Technical Parameter

型号/Model	FLM-BJ-1001	FLM-BJ-2001
胶带宽度/Tape Width	<40mm	<50mm
工作范围/Working Range	50mm	50mm
控制精度/Control Accuracy	1 圈/lap	0.5 圈/lap
包胶速度/Wrapping Speed	60rpm	60rpm
电源电压/Power Supply Voltage	220V	220V
机器尺寸/Size	L500*W350*H200mm	L400*W380*H570mm
机器重量/Weight	30kg	40kg

Semi-Automatic Soldering Machine

半自动焊锡机（FLM-CNC-HX-0001）



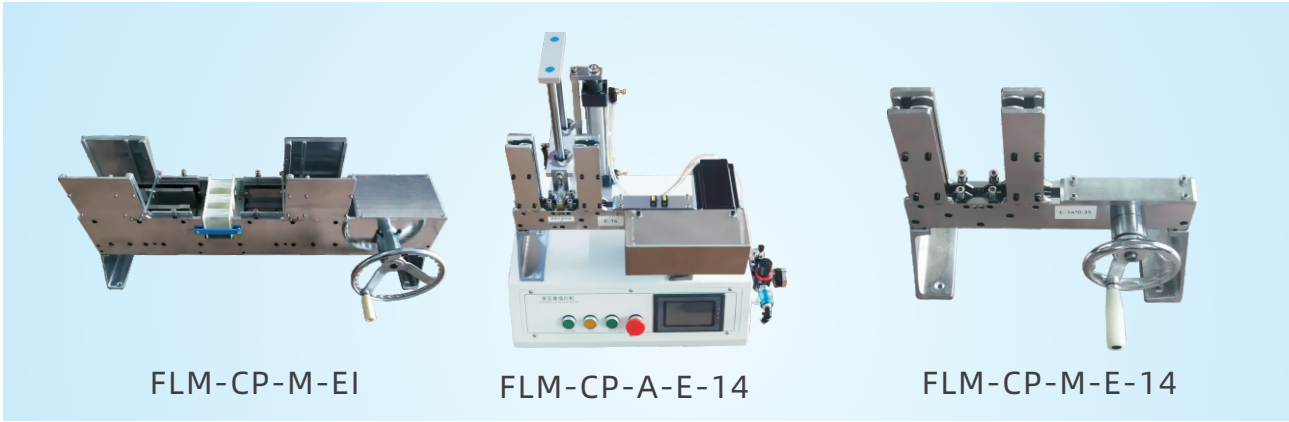
本设备是专为电机、变压器、电感等电子元件设计的自动化系统，气缸锡杯匀速运动，自动准确控制锡面深度，可任意反转保证焊锡效果。

This equipment is an automated system specially designed for electronic components such as motors, transformers, and inductors. The cylinder-driven solder pot moves at a constant speed to automatically and precisely control the solder depth, with bidirectional rotation capability to ensure optimal soldering results.

技术参数 Technical Parameter

型号/Model	FLM-CNC-HX-0001
镀锡速度/Tin Plating Speed	250mm/sec
最高温度/Max. Temperature	600°C
电源电压/Power Voltage	220V
机器尺寸/Size	500L*W600*H550mm
机器重量/Weight	85kg

插片机(FLM-CP) Insertion Machine



本设备是专为小批量变压器生产、维修及实验室研发设计的手动插片工具，通过机械导向+手动操作，实现矽钢片（硅钢片）的精准定位与插装，适用于EI型、UI型等小型变压器铁芯的组装。

This equipment is a manual sheet inserting tool specially designed for small-batch transformer production, maintenance and laboratory research and development. Through mechanical guidance + manual operation, it realizes the precise positioning and insertion of silicon steel sheets (silicon steel sheets), and is suitable for the assembly of small transformer cores such as EI type and UI type.

Product Display
产品展示



Product Display
产品展示

