



ETERNAL 一特



ETERNAL SERVICE
ETERNAL QUALITY

一如既往的服务
特立独行的品质

一特自动化设备有限公司
ETERNAL AUTOMATION CO.,LTD.



THE 公司简介 COMPANY

ETERNAL 一特

2002年,一特创立于美丽的海滨城市珠海,在中山、湖南均设有工厂。核心厂区面积12000多平方米,员工四百余人,是一家集研发、生产、销售自动化绕线机及各种非标自动化设备为一体的国内外知名的高新科技型企业。一特不断提高创新能力,潜心研发核心技术和智能化机型以引领市场,努力实现智能化、平台化、集团化的全产业链发展模式,使之能更全面快捷地服务于国内外市场。

2002, ETERNAL WAS FOUNDED IN BEAUTIFUL SEASIDE CITY ZHUHAI, HAS BRANCHES FACTORIES IN ZHONG SHAN AND HUNAN PROVINCE, WITH CORE PRODUCTION AREA 12000m² AND AROUND 400 EMPLOYEES. ETERNAL IS A WELL-KNOWN HIGH-TECH ENTERPRISE WITH R&D, PRODUCTION AND SALES OF AUTOMATIC WINDING MACHINES AND VARIOUS KINDS OF NON-STANDARD AUTOMATIC SOLUTIONS. TO LEAD THE MARKET, ETERNAL CONTINUE TO IMPROVE CAPABILITY OF INNOVATION AND CONCENTRATE ON DEVELOPING CORE TECHNOLOGY AND INTELLIGENT SOLUTIONS. TO COMPREHENSIVELY PROVIDE HIGH QUALITY AND QUICK SERVICE IN GLOBAL MARKET, ETERNAL ALSO TRYING THE BEST TO FULFIL A WHOLE INDUSTRY CHAIN DEVELOPMENT MODEL OF INTELLIGENCE, PLATFORMIZATION AND COLLECTIVIZATION.



做民族品牌, 承工匠精神

Being National Brand, Inheriting
Craftsmanship Spirit



专注线圈行业工业制造

Concentrate on Coils Industrial
Manufacturing



一如既往的服务, 特立
独行的品质

Eternal Service, Eternal
Quality



中山厂区
Zhongshan Headquarter



珠海厂区
Zhuhai Factory



湖南厂区
Hunan Factory

服务领域 SERVICE AREA



家电/Home Appliances



汽车/Automotive



照明 /Lighting



数码产品/Digital Products



新能源/New Energy



2002

研发成功第一台十轴全自动绕线机，适用于磁头行业，行业市场占有率高达95%。

In 2002, we successfully developed the first 10 Spindles Automatic Winding Machine, which is suitable for the magnetic head industry. The market share of the industry is as high as 95%.

2004

中山众鑫电子有限公司正式成立。

In 2004, Zhongshan Zhongxin Electronic Co., Ltd. was officially established.

2019

定制生产线首次在日本上市企业实现量产，标志着公司成功迈入日本等智能制造强国领域，不断为国内外线圈制造行业产出多种非标自动化设备。

In 2019, our customized production line was firstly setup in a Japanese listed company, it marks Eternal successfully entering intelligent manufacturing big power like Japan and Europe etc., we are constantly offering non-standard automatic production solutions to coils winding industry all over the world.

2020

抗击疫情，义不容辞！全自动口罩生产线20天内完成研发到交付并实现量产。

2020, it's bounden for Eternal to fight against virus! A fully automatic mask production line was developed and delivered with mass production within 20 days.

2018

至今响应国家“一带一路”政策发展国际合作，多个智能工厂装备制造，物联网等项目成功落地。

Since 2018, it has responded to the national "one belt and one way" policy to develop international cooperation, and many intelligent factories, equipment manufacturing and Internet of things have successfully landed.

2017

湖南一特宏宇智能科技有限公司正式成立并投产，中山智能数控加工中心成立，并成功研发投产。欧洲GRASSI TRADE S.R.L.产学研合作中心成立。

In 2017, Hunan Eternal Hongyu Intelligent Technology Co., Ltd was officially established and put into production, Zhongshan intelligent CNC machining center was established and successfully developed and put into production.

Grassi Trade s.r.l. as Eternal research and development cooperation center in Europe was established.

2016

中山市宇威精密机械有限公司成立。印度研发销售中心成立。

In 2016, Zhongshan Yuwei Precision Machinery Co., Ltd. was officially established.

India R&D sales center was established.

2007

珠海一特自动化设备有限公司正式成立并投产。

In 2007, Zhuhai Eternal Automation Co., Ltd. was officially established and put into production.

2008

中山众鑫迁入珠海扩大运营

In 2008, Zhongshan Zhongxin Electronic Co., Ltd. Moved to Zhuhai to expand its operation

2021

2021年公司加大物联网大数据采集以及机器人和视觉应用开发, 已与多家上市公司合作对工业智造数据管理做了全面的布局。

Since 2021, Eternal has increased the Internet of Things big data acquisition, also robot and vision application development, Eternal has cooperated with a number of listed companies to make a comprehensive layout of industrial intelligent manufacturing data management.

2009

成功研发第一台飞叉绕线机, 填补了钟表行业自动化设备的空白。

In 2009, we successfully developed the first flying fork winding machine, which filled in the blank of automatic equipment in the watch industry.

ETERNAL 一特

2011

研发出第一台全自动绕线机流水线, 在汽车行业应用广泛, 大大提高了汽车制造工厂的生产效率

In 2011, the first full-automatic winding machine assembly line was developed, which is widely used in the automobile industry, greatly improving the production efficiency of automobile manufacturing plants.

2015

中山市三乡镇生产基地正式启用。

In 2015, the production base in Sanxiang Town, Zhongshan City was officially opened

2013

中山一特自动化设备有限公司正式成立, 一特(公司) 正式开始为客户提供智能化解决方案。

In 2013, Zhongshan Eternal Automation Co., Ltd. was officially established, and Eternal formally began to provide customers intelligent solutions.

研发实力

R&D STRENGTH



立业十余载，一特作为国内第一批研发智能绕线机设备的科技型企业，销售服务网点已遍布全国各地，并已成功打入亚洲、欧美市场，并在印度、美国、意大利等国设立技术研发中心，开展项目合作。

With more than 10 years development, as first technology-based company for automatic winding machine, Eternal has sales and service network covering all over China, also successfully entered in Asia, Europe and US market, now have sales and R&D branches in India, US and Italy.

中山一特自动化设备有限公司
珠海一特自动化设备有限公司
湖南一特宏宇智能科技有限公司

— | 研 | 发 | 中 | 心 | —



中山研发中心

ZHONGSHAN R&D CENTER

团队全部为本科及硕士以上学历的80、90后新生代中坚力量，为各行业客户开发各类自动化生产线解决方案。

R&D team members are highly educated young peoples, providing automation solutions for customers from different industry area.

印度研发中心

INDIA R&D CENTER

2016年成立，持续满足东南亚线圈行业各公司自动化需求。

Founded in 2016 and continuedly providing different coils winding solutions for customers from Southeast Asia

欧洲研发中心

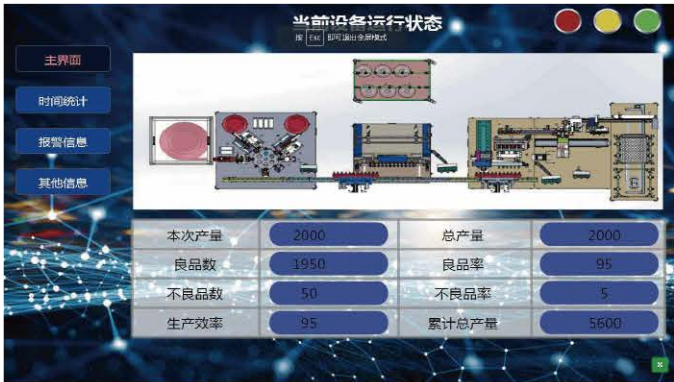
EUROPEAN R&D CENTER

2017年在意大利成立。公司研发的继电器全自动生产线通过欧盟CE认证，并在48小时内于欧洲客户现场实现全线量产，365天0故障率，收获客户高度赞扬。

Our first relay fully automatic production line with CE certification was setup for mass production in Europe within 48 hours since 2017, 365 days 0 failure, it's highly praised by our customer.

一特目前拥有核心软件开发技术，设备中安装的运动控制器均为自主研发，控制轴数可达到128轴，2021年建立并已完成云端数据存储和读取的大数据平台，且在安卓手机安装“一特绕线机”APP后可实现用手机操控调试设备的功能，属行业领先技术。

Eternal currently has the core software development technology, motion controller installed in equipment are developed independently, control shaft number can reach to 128 axis. In 2021 Eternal has established big data platform for cloud data storage and reading, after installation of "Eternal machine" APP in android mobile phone, customer can realize the function of machine mobile controlling and setting, it's leading technology in winding machine industry.



R & D TEAM 研发团队

一特目前拥有核心专利技术47项，其中：发明专利3项、外观设计专利5项、实用新型专利39项。一特所有专利均由公司研发团队自主研发获得。更有8个项目荣获高新技术产品认证。

Eternal has 47 patents: 3 for invention, 5 for appearance design, 39 for utility models. Especially 8 patents are with High-tech certifications.



一特多款出口欧洲设备均通过欧盟CE认证

All European type machines are with CE certificates

营业服务

SALES AND SERVICE NETWORK



吴江办事处 Wujiang office

地址:江苏省苏州市吴江区汾湖经济开发区
重庆路壹号华府东区5栋2206
联系人:庄先生18913710868;
051263628526

吴中办事处 Wuzhong office

地址:江苏省苏州市吴中区木渎镇木胥东路
80号三栋5楼
联系人:戚先生 18913599058

常州办事处: Changzhou Office:

地址:常州市经开区横林镇水厂路瑞丰花苑
44栋乙单元602
联系人:周先生 13924989506

宁波办事处 Ningbo office

地址:宁波市慈溪市掌起镇厉家村彰兴公寓4号楼1单元501室
联系人:周先生 13924989506

厦门办事处 Xiamen office

地址:厦门市湖里大道1号中航技4号厂房西侧5楼
联系人:徐先生 0592-5627686 5650918

生产实力

PRODUCTIVE STRENGTH

一特始终秉承“一如既往的服务,特立独行的品质”的经营理念,顺利通过了ISO9001质量体系认证,并成功获得CE认证。一特始终在安全生产的前提下,坚定不移地保证产品品质。

With idea of “Eternal Service, Eternal Quality”, Eternal already passed ISO9001 certificate and CE certifications for our equipment.

生产车间

PRODUCTION AREA



加工车间

PROCESSING WORKSHOP



全自动绕线机年生产能力
ANNUAL CAPACITY OF WINDING MACHINE
1000 台

服务保障

SERVICE PROTECTION

设备整合方案
免费定制服务

Free Customized Solution

免费培训

Free Training

定期回访

Regular Visit

专业维保

Professional Maintenance

备机服务

Standby Machine Service

充足备库

Abundant Local Inventory

全天候服务

7-day & 24-hour Service

技术支持

Technical Support

客户培训合影留念



客户培训现场



全自动绕线机系列

FULLY AUTOMATIC WINDING MACHINE



产品概述 PRODUCT OVERVIEW

全自动绕线机含EZRS3712、ERRS3716、EZRS4516、ERRS5008、ERRS5012、ERRS5016、ERRS6510、ERRS6514、EZRS8012、ERRS8508、EZRS10006、EZRS12506，等多款机型，一般适用线径0.03-0.5MM,且可通过增大电机功率适用更大线径。可与上料机、插针机、焊锡机、包胶机等搭配组成全自动生产流水线。其他轴距及轴数均可依客户要求定制。

The automatic winding machine includes many models, such as EZRS3712, ERRS3716, EZRS4516, ERRS5008, ERRS5012, ERRS5016, ERRS6510, ERRS6514, EZRS8012, ERRS8508, EZRS10006 and EZRS12506. And the diameter of the spindles is generally suitable for 0.03-0.5mm. Moreover, it can be used for larger diameter by increasing the power of the motor. It can be matched with Feeding Machine, Pin Inserting Machine, Soldering Machine and Tapping Machine to form an automatic production line.



EZRS5012全自动绕线机图
EZRS5012 Automatic Winding Machine



EZRS5012全自动绕线机图 带绞线
EZRS5012 Automatic Winding Machine with Twisting



EZRS5012BA全自动绕线包胶机图 带贴包
EZRS5012BA Automatic Winding Machine with Tapping



ERRS3710BD全自动绕线包胶机图 带拉包滚轮
ERRS3710BD Automatic Winding Machine with Vertical Tapping



ERRS8508全自动绕线机图 带剪刀
ERRS8508 Automatic Winding Machine with Cutter



EZRS6516伺服上料全自动绕线机图 带绞线
EZRS6516 Automatic Winding Machine with Servo Bobbin Loading



EZRS4516翻转上料全自动绕线机图
EZRS4516 Automatic Winding Machine with Rotating Bobbin Loading



EZRS8508全自动绕线机图
EZRS8508 Automatic Winding Machine

使用范围 RANGE OF USAGE

电感、高/低频电子变压器、同步电机，步进电机，充电桩线圈，齿轭组合线圈，膨胀阀线圈，磁头线圈及其它类型小型线圈、电磁阀体、负离子高压包、液晶显示器背光源高/低压线圈、点火高/低压线圈、继电器线圈、充电器线圈、仪器仪表线圈等等。

Inductance coil, high/low frequency transformer, synchronous motor coils, stepper motor coils, charging pile coils, yoke combination coils, expansion valve coils, head coils and other types of small coils, solenoid valve coils, anion high voltage coils, high/low voltage coils of LCD backlight, high/low voltage ignition coils, relay coils, charging device coils and instrumentation coils etc.



ERRS10006 全自动绕线机图 带脱漆吸废线
ERRS10006 Automatic Winding Machine with
Wire Coating Stripping and Waste Wire Absorption

产品特性 MECHANICAL FEATURES

- 1、机身采用优质的树脂砂高级铸件，底座采用钢板无缝焊接或铸铁底座一体成型及加工，承重大，减噪减振，增加机器的稳定性；
- 2、采用高质量导轨和研磨滚珠丝杆，确保机台定位及重复定位的精度；
- 3、主轴和各轴均采用交流伺服电机，各轴运行速度和定位快捷准确；
- 4、骨架到位检测装置可检测到异常的骨架，并及时报警停机，确保导针不被打断；
- 5、操控区域装有启动、预约、急停按钮，方便操作，人性化，实现安全生产；
- 6、可实现端子缠线，端子缠绕可以垂直、水平两个方向；
- 7、绕线品种的更换：只需将机器中已编好的程序调用和更换夹具即可；
- 8、编程方式：触摸屏编程，提供人机交互视教系统，实现所见即所得的编程效果；
- 9、导针杆采用进口模具钢加工制成，垂直度 $<0.01\text{MM}$ 、平行度 $<0.01\text{MM}$ /全长。

- 1.The machinery structure is made of high quality cast materials.
- 2.The machine body is a fusion in a single unit, giving the machine structure strength and stability and reducing noise and vibration.
- 3.The machine is equipped with imported linear guides and ball screw in order to guarantee accuracy of positioning.
- 4.The main spindle rotation system passed strictly quality controls and ensures high speed, low noise and long life.
- 5.The bobbin position control sensor checks the bobbins that aren't in correct position. Otherwise, the machine will sound an alarm and stops to avoid breaking the guiding nozzles.
- 6.The traverse unit is made with a cast material, verticality $<0.01\text{ mm}$, parallelism $<0.01\text{ mm}$ / full length.
- 7.As the AC servo motor has been adopted, the running speed and position speed are quick and precise.
- 8.The machine is equipped with a touch-sensitive screen interface to programming and insert changes.
- 9.The control panel is equipped with start, run and emergency stop buttons, safe and easy to use.
- 10.Through the computer interface it's possible to create and edit programs, as well as insert and recall 60 different programs.



主要技术参数 MAIN TECHNICAL PARAMETERS

项次	型号 MODEL NO.	RS3710	RS3712	RS3716	RS5008	RS5010	RS5012
1	主轴间距 Spindle pitch	37mm	37mm	37mm	50mm	50mm	50mm
2	主轴数 Spindle number	10轴(Spindle)	12轴(Spindle)	16轴(Spindle)	8轴(Spindle)	10轴(Spindle)	12轴(Spindle)
3	主轴方向 Main Spindle Direction	顺时针/逆时针.360°/圈 Clockwise/counterclockwise.360°/Turn					
4	主轴转速 Spindle speed	0~12000rpm					
5	三维行程 Three dimensional travel	X: 85 Y: 85 Z: 55					
6	主轴伺服马达功率 Spindle servo motor power	750W	750W	1500W	750W	750W	750W
7	适用线径 Wire range	0.03~0.5mm (根据张力器选型规格, >0.5mm只需增大电机功率适用) (according to the selection specification of tensioner, >0.5mm only needs to increase the motor power.)					
8	电源电压 Power voltage	AC 220V±10%					
9	功率 Power	2500W	2500W	2500W	2500W	2500W	2500W
10	最大骨架旋转外径 Bobbin outer diameter(Max.)	30mm	30mm	30mm	45mm	45mm	45mm
11	快速夹具接口内径 Quick fixture joint inner diameter	10mm	10mm	10mm	10mm	10mm	10mm
12	导针杆移动伺服马达功率 Traverse motor power	400W (X) 400W (Y) 400W (Z)					
13	导针杆移动速度 Traverse speed(mm/sec)	80mm /秒(s)	80mm/秒(s)	80mm/秒(s)	80mm/秒(s)	80mm/秒(s)	80mm/秒(s)
14	压缩空气 Air pressure	0.4~0.6mpa					
15	主机尺寸 Machine size	800mm*1150mm *1200mm	800mm*1150mm *1200mm	1060mm*1250m m*1200mm	800mm*1150mm *1200mm	800mm*1150mm *1200mm	1000mm*1350mm *1200mm
16	主机重量 Machine weight	500kg	600kg	750kg	600kg	650kg	800kg
17	包胶装置 Taping device	可选 Optional	贴包可选 Simple Type Tapping Optional	可选 Optional	可选 Optional	可选 Optional	贴包可选 Simple Type Tapping Optional
18	绞线装置 Twist Device	可选 Optional	可选 Optional	可选 Optional	可选 Optional	可选 Optional	可选 Optional
19	气动剪刀装置 Pneumatic Wire Cutter device	可选 Optional	可选 Optional	可选 Optional	可选 Optional	可选 Optional	可选 Optional
20	底座 Base	钢板 Steel Plate	钢板 Steel Plate	钢板/铸铁 Steel Plate/ Cast Iron	钢板 Steel Plate	钢板 Steel Plate	钢板/铸铁 Steel Plate/ Cast Iron

RS5016	RS6510	RS6512	RS6514	RS8012	RS8508	RS10006	RS12506
50mm	65mm	65mm	65mm	80mm	85mm	100mm	125mm
16轴(Spindle)	10轴(Spindle)	12轴(Spindle)	14轴(Spindle)	12轴(Spindle)	8轴(Spindle)	6轴(Spindle)	6轴(Spindle)
顺时针/逆时针.360°/圈 Clockwise/counterclockwise.360°/Turn				顺时针/逆时针.360°/圈 Clockwise/counterclockwise.360°/Turn			
0~12000rpm				0~15000rpm			
X: 85 Y: 85 Z: 55				X: 85 Y: 85 Z: 55			
3000W	1500W	1500W	1500W	1500W	1500W	1500W	1500W
0.03~0.5mm (根据张力器选型规格, >0.5mm只需增大电机功率适用) (according to the selection specification of tensioner, >0.5mm only needs to increase the motor power.)							
AC 220V±10%				AC 220V±10%			
4500W	3000W	3000W	3000W	3000W	3000W	3000W	3000W
45mm	60mm	60mm	60mm	65mm	77mm	80	110
12mm	12mm	12mm	12mm	12mm	12mm	12mm	12mm
400W (X) 400W (Y) 400W (Z)				400W (X) 400W (Y) 400W (Z)			
70mm/秒(s)	70mm /秒(s)	70mm/秒(s)	70mm/秒(s)	70mm/秒(s)	70mm/秒(s)	70mm /秒(s)	70mm /秒(s)
0.4~0.6mpa				0.4~0.6mpa			
1200mm*1380mm *1300mm	1000mm*1350mm *1200mm	1200mm*1350mm *1350mm	1200mm*1350mm *1350mm	1200mm*1350mm *1350mm	1000mm*1350mm *1200mm	1000mm*1350mm *1200mm	1000mm*1350mm *1200mm
1000kg	800kg	900kg	1000kg	750kg	850kg	800kg	800kg
不可选 Not optiona	可选 Optional	可选 Optional	可选 Optional	可选 Optional	贴包可选 Simple Type Tapping Optional	拉包滚轮可选 Pulling& Rolling Type Tapping Optional	拉包滚轮可选 Pulling& Rolling Type Tapping Optional
可选 Optional	可选 Optional	可选 Optional	可选 Optional	可选 Optional	可选 Optional	可选 Optional	可选 Optional
可选 Optional	可选 Optional	可选 Optional	可选 Optional	可选 Optional	可选 Optional	可选 Optional	可选 Optional
钢板 Steel Plate	钢板/铸铁 Steel Plate/ Cast Iron	钢板 Steel Plate	钢板 Steel Plate	钢板 Steel Plate	钢板/铸铁 Steel Plate/ Cast Iron	钢板/铸铁 Steel Plate/ Cast Iron	钢板/铸铁 Steel Plate/ Cast Iron

全自动多轴上料绕线机系列

AUTOMATIC FEEDING AND WINDING MACHINE



使用范围 RANGE OF USAGE

工字型电感、IR-CUT线圈自动上料绕线（双骨架）、变压器、E型变压器、滤波器、电感、继电器线圈、汽车点火线圈等产品。

DR magnetic core, IR-cut coil automatic feeding winding(double bobbins), transformer, E-type transformer, filter, inductor, relay coil, automobile ignition coil and others.

产品概述 PRODUCT OVERVIEW

本系列由上料机，EZ/ER全自动8轴、10轴、12轴、16轴、20轴、24轴绕线机组成，具有自动上料排序检测，交换上下料绕线等特点，适用于长期大批量订单的产品。客户可以根据产品大小选用不同轴距轴数的设备。

This production line consist of the feeding machine, EZ/ER 8/10/12/16/20/24-spindle full automatic winding machine. It has many advantage, such as the detect automatic loading bobbin, loading& unloading bobbin for winding wire and so on. It is applicable for large batch order with high precision and high efficiency. Customers can choose the models based on the product.



EZRS4620BAS 自动上料绕线包胶机图
EZRS4620BAS Automatic Winding Machine with Automatic Bobbin Loading and Tapping



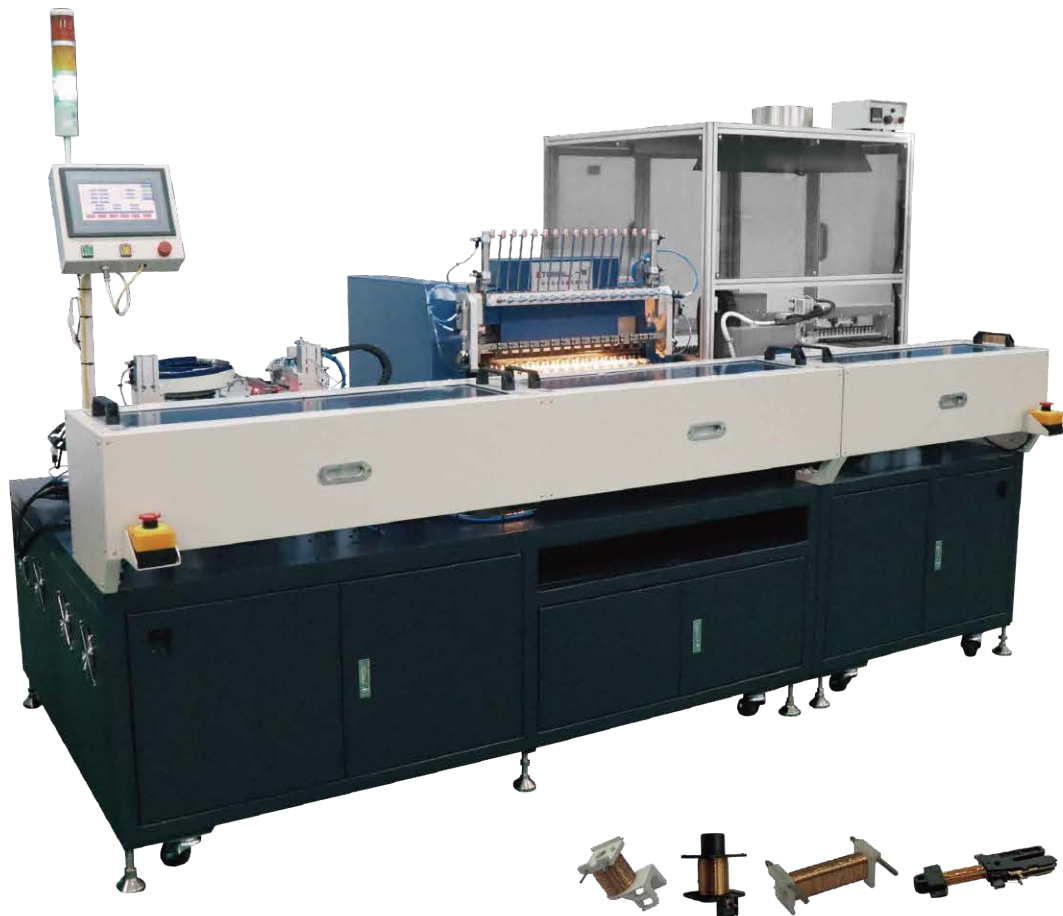
EZRS3316S 自动上料绕线机图
EZRS3316S Automatic Winding Machine with Automatic Bobbin Loading

主要技术参数 MAIN TECHNICAL PARAMETERS

项次	型号 MODEL NO.	RS3316S	RS3324S	RS3712S	RS3716S	RS4620S	RS5012S	RS6512S
1	主轴间距 Spindle pitch	33mm	33mm	37mm	37mm	46mm	50mm	65mm
2	主轴数 Spindle number	16轴(Spindle)	24轴(Spindle)	12轴(Spindle)	16轴(Spindle)	20轴(Spindle)	12轴(Spindle)	12轴(Spindle)
3	主轴方向 Main Spindle Direction	顺时针/逆时针:360°/圈 Clockwise/counterclockwise:360°/Turn						
4	主轴转速 Spindle speed	0~10000rpm						
5	三维行程 Three dimensional travel	X: 85 Y: 85 Z: 55						
6	主轴伺服马达功率 Spindle servo motor power	750W	750W×2	750W	750W	750W×2	750W	1500W
7	适用线径 Wire range	0.03~0.5mm (根据张力器选型规格) 0.03-0.5mm(According to tensioner)						
8	电源电压 Power voltage	AC 220V±10%						
9	功率 Power	2500W	2500W	2500W	2500W	2500W	3000W	3000W
10	最大骨架旋转外径 Bobbin outer diameter(Max.)	25mm	25mm	25mm	25mm	42mm	42mm	50mm
11	快速夹具接口内径 Quick fixture joint inner diameter	10mm	10mm	10mm	10mm	10mm	10mm	12mm
12	导针杆移动伺服马达率 Traverse motor power	400W (X) 400W (Y) 400W (Z)						
13	导针杆移动速度 Traverse speed(mm/sec)	50mm /秒(s)						
14	压缩空气 Air pressure	0.4~0.6mpa						
16	主机尺寸 Machine size	2000mm*1200mm*1300mm	2600mm*1350mm*1300mm	2000mm*1200mm*1300mm	2200mm*1250mm*1500mm	2600mm*1350mm*1500mm	2200mm*1250mm*1500mm	2600mm*1400mm*1650mm
17	主机重量 Machine weight	900kg	900kg	900kg	900kg	900kg	900kg	900kg
18	底座 Base	钢板 Steel Plate	钢板 Steel Plate	钢板 Steel Plate	钢板 Steel Plate	钢板 Steel Plate	钢板/铸铁 Steel Plate/ Cast Iron	钢板 Steel Plate

小轴距多轴生产线系列

SMALL SPINDLE PITCH MULTIPLE SPINDLE PRODUCTION LINE



产品概述 PRODUCT OVERVIEW

机型: 3316、3716、3324、4620、3124

适用: 磁头线圈、钟表线圈、电感等小型线圈

全自动小轴距多轴生产线由上料机、绕线机、焊锡机、弯脚检测装配机组成, 具有自动上料排序检测, 交换上下料绕线等功能, 可增加自动装盘装置, 适用于长期大批量订单的产品。

Models: 3316、3716、3324、4620、3124

Range of usage: head coils、clock coil、inductor and other small coils

This production line consist of the feeding machine, winding machine, soldering machine and bending foot detection and assembly machine. It has many advantage, such as the detect automatic loading bobbin, loading&unloading bobbin for winding wire and so on. Automatic disc loading device can be added. It is applicable for large batch order with high precision and high efficiency.

工艺流程 PROCESS FLOW

振动上料→绕线→浸锡

Automatic vibration feeding→winding→soldering

特点 MECHANICAL FEATURES

- 1、设备具有胶带检测以及断线报警功能，可防止因断线或胶带漏包造成产品不良。
- 2、自动焊锡机采用三维机械手，精度高且适用性广，可实现角度0—270度任意角度焊锡，焊锡可增加自动加锡，助焊剂自动循环功能。
- 3、对于工艺简单的常规电子变压器可扩展后段磁芯装配、包胶、检测等后段设备。

1. Machine with tapping and wire break detecting device, can better avoid defective coils due to wire break or without tapping.
2. Automatic soldering machine with triaxial machine hand, with high precision and can fulfilled with 0-270°soldering, solder automatic feeding and flux cycling is available.
3. Can combined with core assembling, tapping and testing machines afterwards for normal transformer.



EZRS4620BAL05 全自动生产线
EZRS4620BAL05 AUTOMATIC PRODUCTION LINE

工艺流程 PROCESS FLOW

振动上料→绕线包胶→绕线包胶→浸锡→不良品剔除→传送带下料

Automatic Vibration Feeding→Winding& Tapping→Tin Dipping→Testing& NG Isolation→Unloading on conveyor belt



EZRS3124L04 全自动生产线
EZRS3124L04 AUTOMATIC PRODUCTION LINE

工艺流程 PROCESS FLOW

振动上料→绕线+绞线→浸锡→不良品剔除→装盘

Automatic Vibration Feeding→Winding& Wire Twisting→Tin Dipping→Testing& NG Isolation→Tray Loading



EZRS4620L03 全自动生产线
EZRS4620L03 AUTOMATIC PRODUCTION LINE

工艺流程 PROCESS FLOW

振动上料→绕线包胶+绞线→浸锡→不良品剔除→传送带下料

Automatic Vibration Feeding→Winding, Tapping& Wire Twisting→Tin Dipping→Testing& NG Isolation→Unloading on conveyor belt

主要技术参数 MAIN TECHNICAL PARAMETERS

项次	型号 MODEL NO.	3316	3712/3716	4620	3124
1	自动上料 Automatic feeding	350 mm 振动盘自动排序 350 mm vibration pallet and automatic sorting			
2	传送方式 Conveyer device	皮带传送轨道 Belt conveyer	皮带传送轨道 Belt conveyer	皮带传送轨道 Belt conveyer	皮带传送轨道 Belt conveyer
3	每次上料产品数 Number of products on each product	4 PCS			
4	自动绕线机 Automatic Winding machine	1台 one machine	1台, 2台 或更多 One, two or more machines	1台, 2台 或更多 One, two or more machines	1台, 2台 或更多 One, two or more machines
5	主轴数 Spindle number	16轴(Spindle)	12/16轴(Spindle)	20轴(Spindle)	24轴(Spindle)
6	主轴间距 Spindle pitch	33mm	37 mm	46mm	31mm
7	主轴方向 Main Spindle Direction	顺时针/逆时针 360°/圈 Clockwise/counterclockwise.360°/Turn			
8	主轴转速 Spindle speed	10000 rpm	15000rpm	10000rpm	15000rpm
9	三维行程 Three dimensional travel	X: 85 Y: 85 Z: 55	X: 85 Y: 85 Z: 55	X: 85 Y: 85 Z: 55	X: 85 Y: 85 Z: 55
10	主轴伺服马达功率 Spindle servo motor power	750W	750W	750W×2	750W×2
11	适用线径 Wire range	0.05~0.45mm(根据张力器) 0.05-0.45mm(According to tensioner)	0.03~0.5mm	0.04~0.4mm (根据张力器) 0.05-0.45mm(According to tensioner)	0.04~0.4mm (根据张力器) 0.05-0.45mm(According to tensioner)
12	最大骨架外径 Bobbin outer diameter(Max.)	20mm	25mm	40mm	24mm
13	快速夹具接口内径 Spindle diameter	10mm	10mm	10mm	8mm
14	导针杆移动伺服马达功率 Traverse motor power	400W (X) 400W (Y) 400W(Z)	400W (X) 400W (Y) 400W(Z)	400W (X) 400W (Y) 400W(Z)	400W (X) 400W (Y) 400W(Z)
16	导针杆移动速度 Traverse speed(mm/sec)	50mm /秒(s)	60mm /秒(s)	50mm /秒(s)	60mm /秒(s)
17	自动焊锡机 Automatic soldering machine	EZHS3316	EH1812	EH4610	EH3112
18	焊锡方式 Soldering method	三维XYZ焊锡 3D XYZ Soldering	三维XYZ焊锡 3D XYZ Soldering	三维XYZ焊锡 3D XYZ Soldering	三维XYZ焊锡 3D XYZ Soldering
19	下料方式 Feeding mode	传送带下料 Unload on belt	传送带下料 Unload on belt	传送带下料 Unload on belt	传送带下料 Unload on belt
20	电源电压 Power voltage	AC 220V±10%	AC 220V±10%	AC 220V±10%	AC 220V±10%
21	功率 Power	2000W	7500 w	4000W	6000W
22	生产线重量 Production line weight	1700kg	1800 kg	2200kg	2200kg
23	压缩空气压力 Air pressure	0.4~0.6mpa	0.4-0.6 mpa	0.4~0.6mpa	0.4~0.6mpa
24	主机尺寸 Main Machine size	800mm*1150mm*1200mm	1000mm*1350mm*1200mm	1200mm*1380mm*1200mm	1200mm*1380mm*1500mm
25	使用范围 Using range	IR-CUT线圈生产 IR-CUT Coils Production	磁头、变压器、电感、IR-CUT线圈生产 Magnetic Head, Transformer, Inductor, IR-CUT Coils Production	变压器 Transformer	继电器 Relay

全自动步进电机线圈生产线系列

FULLY AUTOMATIC STEPPER MOTOR COIL PRODUCTION LINE



产品概述 PRODUCT OVERVIEW

机型: 4516

全自动步进电机线圈生产线由上料机、绕线机、焊锡机、弯脚检测装配机组成，具有自动上料排序检测，交换上下料绕线等功能，可增加自动装盘装置，适用于长期大批量订单的产品。

Models: 4516

This production line consist of the feeding machine, winding machine, soldering machine and bending foot detection and assembly machine. It has many advantages, such as the detect automatic loading bobbin, loading& unloading bobbin for winding wire and so on. Automatic disc loading device can be added. It is applicable for large batch order with high precision and high efficiency.

工艺流程 PROCESS FLOW

自动插针→振动上料→绕线→浸锡→压PIN→检测→装盘

Automatic pin Inserting→ automatic vibration feeding→ winding→ tin dipping→ pin bending→ testing→ tray loading

特点 MECHANICAL FEATURES

- ① 一体线机型：插针机、绕线机、焊锡机、连线结构；
 - ② 产能 > 1200/小时；
 - ③ 有 RS485-MODBUS 接口数据采集功能；
 - ④ 机器有防护罩；
 - ⑤ 绕线和焊锡机作业台面加装安全光栅，确保操作员肢体安全；
 - ⑥ 焊锡机出品线球在输送皮带上无碰撞扎堆现象，按个分开送出；
 - ⑦ 浸锡机出品有开路不良测出功能、自动加锡功能。
- ① Integrated model: Pin Inserting Machine, winding machine, soldering machine and Connection structure;
 - ② Capacity: >1200pcs/h ;
 - ③ Has RS485-MODBUS interface data collection function;
 - ④ Machine with protective cover;
 - ⑤ Install safety raster on winding and soldering machine work surface to ensure operator safety;
 - ⑥ No collision and piling up of solder discharging products on conveyor belt, for separate delivery;
 - ⑦ Tin dipping machine has open circuit bad detection function and automatic tin adding function.

主要技术参数 MAIN TECHNICAL PARAMETERS

项次	型号 MODEL NO.	EZRS4516L05
1	自动上料 Automatic feeding	350 mm 振动盘自动排序 350 mm vibration pallet and automatic sorting
2	传送方式 Conveyer device	皮带传送轨道 Belt conveyer
3	自动绕线机 Automatic Winding machine	1台或2台 one or two machine
4	主轴数 Spindle number	16轴(Spindle)
5	主轴间距 Spindle pitch	45mm
6	主轴方向 Main Spindle Direction	顺时针/逆时针 每圈/360 Clockwise/counterclockwise.360°/Turn
7	主轴转速 Spindle speed	10000 rpm
8	三维行程 Three dimensional travel	X: 85 Y: 85 Z: 55
9	主轴伺服马达功率 Spindle servo motor power	1500W
10	适用线径 Wire range	0.04~0.4mm (根据张力器) (According to tensioner)
11	最大骨架外径 Bobbin outer diameter(Max.)	40mm
12	快速夹具接口内径 Spindle diameter	10mm
13	导针杆移动伺服马达功率 Traverse motor power	400W (X) 400W (Y) 400W (Z)
14	导针杆移动速度 Traverse speed(mm/sec)	80mm /秒(s)
15	自动焊锡机 Automatic soldering machine	EH4508
16	焊锡方式 Soldering method	直线式 Linear Type
17	下料方式 Feeding mode	装盘/传送带下料 Tray loading/ Unloading on belt
18	电源电压 Power voltage	AC 220V ±10%
19	功率 Power	4000W
20	生产线重量 Production line weight	2600kg
21	压缩空气压力 Air pressure	0.4~0.6mpa
22	主机尺寸 Main Machine size	1200mm*900mm*1100mm



全自动生产线系列

AUTOMATIC PRODUCTION LINE



产品概述 PRODUCT OVERVIEW

机型: 5016、5012、3324、4620

适用: 低频变压器、变压器等

全自动低频变压器线圈生产线可由上料机、绕线机、焊锡机、弯脚检测装配机组成, 具有自动上料排序检测, 交换上下料绕线等功能, 可增加自动装盘装置, 适用于长期大批量订单的产品。

Models: 5016, 5012, 3324, 4620

Applicable products: low frequency transformer, transformer, etc.

This production line consist of the feeding machine, winding machine, soldering machine and pin bending detection and assembly machine. It has many advantages, such as the detect automatic loading bobbin, loading& unloading bobbin for winding wire and so on. Automatic tray loading device can be added. It is applicable for large batch order with high precision and high efficiency.



特点 MECHANICAL FEATURES

- 1、设备具有胶带检测以及断线报警功能，可防止因断线或胶带漏包造成产品不良。
 - 2、自动焊锡机采用三维机械手，精度高且适用性广，可实现角度0—270度任意角度焊锡，焊锡可增加自动加锡，助焊剂自动循环功能。
1. Machine with tapping and wire break detecting device, can better avoid defective coils due to wire break or without tapping.
 2. Automatic soldering machine with triaxial machine hand, with high precision and can fulfilled with 0-270° soldering, solder automatic feeding and flux cycling is available.

工艺流程 PROCESS FLOW

振动上料→绕线、绞线→焊锡→弯脚成型→检测→装盘

Automatic vibration feeding→winding&twisting→soldering→pinning→testing→tray loading



EZRS5012L03 全自动生产线
EZRS5012L03 AUTOMATIC PRODUCTION LINE

工艺流程 PROCESS FLOW

振动上料→绕线→浸锡→检测→不良品剔除→传送带下料

Automatic Vibration Feeding→Winding→Tin Dipping→Testing& NG Isolation→Unloading on conveyor belt



EZRS5016L04 全自动生产线
EZRS5016L04 AUTOMATIC PRODUCTION LINE

工艺流程 PROCESS FLOW

振动上料→绕线、绞线→绕线、绞线→浸锡→检测→不良品剔除→传送带下料

Automatic Vibration Feeding→Winding& Wire Twisting→Tin Dipping→Testing& NG Isolation→Unloading on conveyor belt



EZRS5016L06 全自动生产线
EZRS5016L06 AUTOMATIC PRODUCTION LINE

工艺流程 PROCESS FLOW

振动上料→绕线→浸锡→检测→不良品剔除→扳PIN→装盘

Automatic Vibration Feeding→Winding→Tin Dipping→Testing& NG Isolation→Pin Bending→Tray Loading



EZRS3324L06 全自动生产线
EZRS3324L06 AUTOMATIC PRODUCTION LINE

工艺流程 PROCESS FLOW

振动上料→插PIN→绕线→浸锡→检测→不良品剔除→扳PIN→传送带下料

Automatic Vibration Feeding→Pin Inserting→Winding→Tin Dipping→Testing& NG Isolation→Pin Bending→Unloading on conveyor belt



全自动同步电机线圈生产线系列

AUTOMATIC SYNCHRONOUS MOTOR COIL PRODUCTION LINE



产品概述 PRODUCT OVERVIEW

机型: 6516L04

全自动同步电机线圈生产线由上料机、绕线机、焊锡机、弯脚检测装配机组成，具有自动上料排序检测，交换上下料绕线等功能，可增加自动装盘装置，适用于长期大批量订单的产品。

Model: 6516L04

This production line consist of the feeding machine, winding machine, soldering machine and pin bending detection and assembly machine. It has many advantages, such as the detect automatic loading bobbin, loading& unloading bobbin for winding wire and so on. Automatic tray loading device can be added. It is applicable for large batch order with high precision and high efficiency.

特点 MECHANICAL FEATURES

- 1、设备具有胶带检测以及断线报警功能，可防止因断线或胶带漏包造成产品不良。
 - 2、自动焊锡机采用三维机械手，精度高且适用性广，可实现角度0—270度任意角度焊锡，焊锡可增加自动加锡，助焊剂自动循环功能；可选取转盘焊锡或直线焊锡方式。
- 1.Machine with tapping and wire break detecting device, can better avoid defective coils due to wire break or without tapping.
2.Automatic soldering machine with triaxial machine hand, with high precision and can fulfilled with 0-270° soldering, solder automatic feeding and flux cycling is available.

工艺流程 PROCESS FLOW

自动插针→振动上料→绕线、绞线→焊锡→弯脚成型→检测→装盘

Automatic stacking→automatic vibration feeding→winding&twisting→soldering→pinning→testing→discharge

主要技术参数 MAIN TECHNICAL PARAMETERS

项次	型号 MODEL NO.	6514/6516
1	自动上料 Automatic feeding	震动盘上料 Loading by vibration bowl feeder
2	传送方式 Conveyer device	伺服电机小车 Servo-motor Carrier
3	最高效率 Maximum efficiency	3s / pcs
4	每次上料产品数 Number of products on each product	单个储料 Single Bobbin Storage
5	自动绕线机 Automatic Winding machine	EZRS6516
6	主轴数 Spindle number	14轴(Spindle)/16轴(Spindle)
7	主轴间距 Spindle pitch	65mm
8	主轴方向 Main Spindle Direction	顺时针/逆时针 每圈/360° Clockwise/counterclockwise.360°/Turn
9	主轴转速 Spindle speed	10000rpm
10	三维行程 Three dimensional travel	X: 85 Y: 85 Z: 55
11	主轴伺服马达功率 Spindle servo motor power	2000W
12	适用线径 Wire range	0.04~0.4mm (根据张力器) (According to tensioner)
13	最大骨架外径 Bobbin outer diameter(Max.)	62mm
14	快速夹具接口内径 Spindle diameter	12mm
16	导针杆移动伺服马达功率 Traverse motor power	400W (X) 400W (Y) 400W (Z)
17	导针杆移动速度 Traverse speed(mm/sec)	50mm /秒(s)
18	自动焊锡机 Automatic soldering machine	EH5008
19	焊锡方式 Soldering method	直线式 Linear Type
20	下料方式 Feeding mode	传送带下料 Unload on belt
21	电源电压 Power voltage	AC 220V±10%
22	功率 Power	4000W
23	生产线重量 Production line weight	800kg
24	压缩空气压力 Air pressure	0.4~0.6mpa
25	主机尺寸 Main Machine size	1200mm*900mm*1100mm

全自动绕线套管机系列

AUTOMATIC WINDING AND SLEEVING MACHINE



产品概述 PRODUCT OVERVIEW

- 1、一台机可实现自动上下料、自动穿套管、自动绕线、剪线、包挡墙、包胶等工艺。一人可看多台设备，提高生产效率。
- 2、不用分合线嘴完美解决伤线问题；
- 3、伺服夹管可以任意调节夹管的松紧度，适用于多种管径；
- 4、伺服压线装置可以压横向任意位置，可实现顺逆绕线的压线收直角；

- 1.Machine can realize automatic feeding& unloading, sleeving, winding, wire cutting, margin tapping, tapping and other processes. One operator can manage several machines and better improve production efficiency.
- 2.No splitting nozzle, perfectly solve the problem of wire damage
- 3.Servo sleeve holder can flexibly adjust the tightness of the clamp, suitable for a variety of sleeve sizes.
- 4.Servo wire pressing device can press the wire at any position transversely.

适用：变压器等

Applicable: transformer etc.,



连线方案 LINE CONNECTION SOLUTION



主要技术参数 MAIN TECHNICAL PARAMETERS

项次	型号 MODEL NO.	EZTY01/EUTY01(多台可任意联机) (Multiple Sets Flexible Connection)
1	主轴间距 Spindle pitch	单轴 (Spindle)
2	主轴数 Spindle number	1
3	主轴方向 Main Spindle Direction	顺时针/逆时针 每圈/360° Clockwise/counterclockwise.360°/Turn
4	主轴转速 Spindle speed	3000rpm
5	三维行程 Three dimensional travel	X: 400 Y: 250 Z: 150
6	主轴伺服马达功率 Spindle servo motor power	400W
7	适用线径 Wire range	0.05-0.6单线/双线/绝缘线/多股线 Single wire/ Double wires/ Insolation wire/ Strand wire
8	电源电压 Power voltage	220V
9	功率 Power	2000W
10	最大骨架旋转外径 Bobbin outer diameter(Max.)	60mm
11	快速夹具接口内径 Quick fixture joint inner diameter	10mm
12	导针杆移动伺服马达功率 Traverse motor power	400W
13	平台移动速度 Traverse speed(mm/sec)	80mm/s
14	压缩空气 Air pressure	0.4-0.6mpa
16	主机尺寸 Machine size	1700*850*1350 / 1800*1050*1900(EUTY01)
17	主机重量 Machine weight	260kg

全自动内绕式绕线机系列

FULL AUTOMATIC INTERNAL WINDING MACHINE



产品概述 PRODUCT OVERVIEW

本系列绕线机由2轴、4轴、6轴绕线机组成，线径范围 0.1MM-1.2MM（单双线都可以），精密排线，自动换槽，线头线尾自动剪线，适应多种，通用性强，换型操作简单，搭配机械手可实现全自动生产流水线。其他轴距及轴数均可依客户要求定制。可选配安全光栅，伺服张力系统等。

This machine type consist of the 2/4/6-spindle winding machine. Wire diameter range from 0.1-1.2mm(single or double wires). It has many advantages, such as precision wiring, automatic slot switching, automatic wire cutting. Suitable for multiple coil types production and easy coil type switching operation, with a manipulator to achieve a full automatic production line. Other spindle pitch and spindle number can be customized according to customer requirements. Safety raster and server tension system, etc. are optional.

适用行业：无刷电机，风扇电机

Range of usage: Brushless motor, fan motor

工艺流程 PROCESS FLOW

人工上下料→自动缠头→自动绕线→自动换槽→自动剪线→收线

Manual loading and unloading → automatic terminal wrapping → automatic winding → automatic slot changing → automatic wire cutting → wire taking-up

特点 MECHANICAL FEATURES

1. 机身底板采用优质的树脂砂高级铸件，确保设备机身在主轴高速运转的情况下不会变形；
2. 采用优质导轨和研磨滚珠丝杆，确保机台定位及重复定位的精度；
3. 主轴和各轴均采用交流伺服电机，各轴运行速度和定位快捷准确，实现高速绕线，绕线速度可达900匝/分钟，排线效果整齐无交叉，无漆皮损伤的现象；
4. 操控区域装有启动、预约、急停按钮，方便操作，人性化，实现安全生产；
5. 绕线品种的更换：只需将机器中已编好的程序调用和更换夹具即可；
6. 编程方式：触摸屏编程，提供人机交互视教系统，能实现精密绕线工艺需求，同时含有不同的绕线参数对应不同的编号，可实现不同定子对特殊匝数的要求。

1. High quality resin sand advanced castings for soleplate to ensure that the machine body will not be deformed when the spindle is running at high speed.
2. High-quality guide rails and ground ball screws are used to ensure the accuracy of machine positioning and repeated positioning.
3. AC servo motors are used for the main shaft and each dimension, the running speed and positioning of each axis are fast and accurate. High speed winding, winding speed up to 900 rpm, neat and no crossover, no lacquer damage.
4. The control area is equipped with start, appointment and emergency stop buttons, which is convenient for operation and humanized to realize safe production.
5. Easy to change the jigs and programming which has been already saved in machine when you want to change the coil.
6. Program type: touch-screen programming, provide man-machine interface teaching system to edit program. It can fulfill the requirement of precise winding technology, and has different winding parameters corresponding to different numbers. It can also fulfill the requirement of different stators for special turns.

主要技术参数 MAIN TECHNICAL PARAMETERS

项次	型号 MODEL NO.	ERNS2304	ERNS1406
1	主轴间距 Spindle pitch	230mm	140mm
2	主轴数 Spindle number	4轴(Spindle)	6轴 (Spindle)
3	主轴方向 Main Spindle Direction	顺时针/逆时针.360°/圈 Clockwise/counterclockwise.360°/Turn	顺时针/逆时针.360°/圈 Clockwise/counterclockwise.360°/Turn
4	主轴转速 Spindle speed	800rpm	1000rpm
5	三维行程 Three dimensional travel	X: 135 Y: 135 Z: 135	X: 135 Y: 135 Z: 120
6	主轴伺服马达功率 Spindle servo motor power	2.0KW×2	2.0KW×2
7	适用线径 Wire range	0.1-1.2mm (根据张力器) (According to tensioner)	0.1-1.2mm (根据张力器) (According to tensioner)
8	电源电压 Power voltage	AC 380V±10%	AC 380V±10% (3P)
9	功率 Power	18KW	24KW
10	最大骨架旋转外径 Bobbin outer diameter(Max.)	外径小于Ø115, 内径大于Ø10mm, 定子总高度小于65mm OD<φ115, ID>φ10mm, Stator Height<65mm	外径小于Ø80, 内径大于Ø10mm, 定子总高度小于60mm OD<φ80, ID>φ10mm, Stator Height<60mm
11	压缩空气 Air pressure	0.4~0.6mpa	0.4~0.6mpa
12	主机尺寸 Machine size	1430mm*1790mm*1950mm	1430mm*1790mm*1950mm
13	主机重量 Machine weight	900kg	1200kg

可选装置: 无



自动插针机系列

AUTOMATIC PIN INSERTING MACHINE



产品概述 PRODUCT OVERVIEW

产品采用气动和凸轮结构完成插PIN动作，操作简单、工作效率高、实现全自动化，可单独或连接绕线机上料工序使用，通过PLC控制器可以灵活的调整各项参数，适用于各类电子变压器线圈骨架、继电器线圈骨架、风扇马达线圈骨架、微型电机线圈骨架、步进电机线圈骨架、高低包线圈骨架、充电器线圈骨架、电感线圈骨架等各类线圈骨架。可依客户要求定制。

This machine uses pneumatic and cam structure to complete PIN insertion, which is simple to operate, with high efficiency and full automation. It can be used in feeding process of winding machine alone or connected. Various parameters can be flexibly adjusted by the PLC controller. It is suitable for various types of electronic transformer bobbin, relay coil bobbin, fan motor coil bobbin, micro motor coil bobbin, step motor bobbin, high and low voltage transformer coil bobbin, charger coil bobbin, inductance coil bobbin and other coil bobbins. It can be customized according to customer requirements.

工艺流程 PROCESS FLOW

震盘自动上料→自动插PIN→PIN针高度检测→自动排出

automatic vibration feeding→automatic insertion of PIN→PIN pin height detection→automatic discharge

特点 MECHANICAL FEATURES

1. 泛用性大，只须更换产品专用模具，短时间可变更形式；
2. 模具更换调整简单，针之长度、咬花位置、咬花深度容易调整；
3. 贺形针、四角针、平板针均可适用，可同时插多对针；
4. 线材用完或弯针缺料时可自动停机及报警；
5. 生产数量有计数器显示，可设定数量，够数时可自动停机及报警。

1. Wide usability, only need to change the mould in a short time.
2. Mould replacement and adjustment is simple, pin length, texture position and depth are easy to adjust.
3. Helix pin, quadrilateral pin and flat pin are all suitable for inserting multiple pairs of pins at the same time.
4. Automatic stop and alarm when wire is used up or pin is out of stock.
5. The output quantity has counter display and it can be set flexibly, machine will automatically stopped and alarmed when reach target quantity

使用范围 RANGE OF USAGE

适用于各类电子变压器线圈骨架、继电器线圈骨架、风扇马达线圈骨架、微型电机线圈骨架、步进电机线圈骨架、高低包线圈骨架、充电器线圈骨架、电感线圈骨架等各类线圈骨架。

Applicable to all types of coil bobbin, such as transformer coil, relay coil, fan motor coil, micro motor coil, stepping motor coil, high and low voltage transformer coil, charger coil, inductance coil and so on.

部分样品 SAMPLE



主要技术参数 MAIN TECHNICAL PARAMETERS

共同参数	上料方式 Feeding way	机械手自动取料 Automatic Taking, Bobbin by manipulator
	传送方式 Conveyer way	皮带传送 Belt conveyer
	适用骨架 Applicable skeleton	依样品而定 according to bobbin sample
	电源电压 Power voltage	AC 220V±10%
	压缩空气 Air pressure	0.4~0.6mpa
	主机尺寸 Main Machine size	800mm*900mm*1900mm
	主机重量 Machine weight	300kg
	类型 Type	转盘 Turntable
	工位 Station	4 / 6 / 8

自动焊锡机系列

AUTOMATIC SOLDERING MACHINE



产品概述 PRODUCT OVERVIEW

自动焊锡机采用三轴联动设计模式，实现三度空间全方位调节。可单独或连接绕线工序使用，通过专用控制器可以调整至您想要的任意焊接之位且搭配自动送锡系统和阻焊剂循环系统，实现全自动焊锡工序。操控容易新手二小时熟练。特别适合各类电子线圈、电子元器件等。

The automatic solder machine uses three-axis linkage design mode to achieve three-dimensional space adjustment. It can be used independently or in connection with the winding process. It can be adjusted to any soldering position you want through a dedicated controller and with automatic tin feeding system and solder blocking circulation system to achieve full automatic soldering process. It can be easily operated and mastered within two hours. It is especially suitable for all types of electronic coils soldering process.

工艺流程 PROCESS FLOW

自动送料→助焊剂→焊锡→冷却→测试→分选→下料

Automatic feeding→fluxing→soldering→cooling→testing→sorting→discharge

特点 MECHANICAL FEATURES

- 1、皮带传送交换上下料，自动取料、助焊、焊锡；
- 2、底座采用钢板无缝焊接，承重大，减噪减振，增加机器的稳定性；
- 3、采用进口导轨和研磨滚珠丝杠，确保机台之定位及重复定位的精度；
- 4、机种更换方便，只需要调用合适的程序和更换夹具即可，设备操作简单；
- 5、采用三维机械手，精度高且适用性广，可实现角度0-270度任意角度焊锡；
- 6、可选配增加自动加锡（锡面探测可选择探针或光纤），助焊剂自动循环功能；
- 7、对于工艺简单的常规电子变压器可扩展后段磁芯装配、包胶、检测等后段设备；
- 8、适应长期大批量订单的产品。

1. Belt conveyor exchanges feeding and unloading, automatic feeding, fluxing and soldering
2. The base adopts seamless welding of steel plate, bearing heavy loads, reducing noise and vibration, and increasing the stability of the machine;
3. High-quality guide rails and ground ball screws are used to ensure the accuracy of machine positioning and repeated positioning;
4. Easy to change the jigs and programming which has been already saved in machine when you want to change the coil.
5. With triaxial machine hand, with high precision and can fulfilled with 0-270°soldering;
6. Automatic tin addition (probe or optical fiber can be selected for tin surface detection) and automatic flux circulation function can be added .
7. Machine can be connected with core assembling, tapping and testing machines afterwards for simple transformer coil
8. Machine is suitable for long-term mass orders.

使用范围: 变压器、磁头线圈、刷卡磁头线圈等

Range of usage: Transformer, head coil, swipe head coil, etc.



主要技术参数 MAIN TECHNICAL PARAMETERS

共同参数	上料方式 Feeding way	机械手自动取料 automatic taking, bobbin by manipulator
	传送方式 Conveyer way	皮带传送 Belt conveyer
	焊锡旋转角度 Angle of solder rotation	0-270°
	适用骨架 Applicable skeleton	依样品而定 according to bobbin sample
	电源电压 Power voltage	AC 220V±10%
	伺服马达功率 Traverse motor power	100W (X) 400W (Y) 400W (Z)
	压缩空气 Air pressure	0.4~0.6mpa
	主机尺寸 Main Machine size	900mm*1500mm*1900mm
	主机重量 Machine weight	400kg

环形输送线系列

CIRCULAR CONVEYOR LINE



工艺流程 PROCESS FLOW

电机上盖有料→4轴机器人抓取(一次取2PCS,其中一个备用)→CCD确认物料位置→4轴机器人装配→线圈上料→4轴机器人抓取(一次取2PCS,其中一个备用)→CCD确认物料位置→4轴机器人装配→电机下盖有料→4轴机器人抓取(一次取2PCS,其中一个备用)→CCD确认物料位置→4轴机器人装配→电机下盖压入→线圈换向装配→电机上盖换向装配→电机上盖压入→CCD检查装配→不良品下料

Motor upper cover loading → 4-axis robot grabbing (2pcs per time, one for standby) → CCD confirms the material position → 4-axis robot assembly → coils loading → 4-axis robot grabbing (2pcs per time, one for standby) → CCD confirms the material position → 4-axis robot assembly → Motor lower cover loading → 4-axis robot grabbing (2pcs per time, one for standby) → CCD confirms the material position → 4-axis robot assembly → press in the lower cover of motor → coil reversing assembly → reverse assembly of the upper cover of motor → press in the upper cover of motor → CCD inspection the assembly → isolation of defective products

用途: 步进电机线圈外壳组装

Range of usage: Assembly of stepper motor coil housing

部分样品 SAMPLE



全自动机械手设备系列

AUTOMATIC ROBOT MACHINE



产品概述 PRODUCT OVERVIEW

本机体由一个六轴机器人、上料装置、包胶装置、助焊装置、测试装置、整脚装置、焊锡装置、激光打标装置、下料传送装置及不良品下料装置组成。
The machine is composed of a six axis robot, feeding device, tapping device, fluxing device, resistance testing device, pin bending device, soldering device, laser marking device, belt unloading device and NG Coils Unloading Device.

工艺流程 PROCESS FLOW

上料→包胶→沾助焊剂→焊锡→引脚折弯→电阻测试→激光打标→成品下料
Coil feeding→ tapping→ fluxing→ soldering→ pin bending→ resistance testing→ laser marking→ unloading

部分样品 SAMPLE



EZ半自动绕线机

EZ SEMI-AUTOMATIC WINDING MACHINE



产品概述 PRODUCT OVERVIEW

EZ半自动绕线机, 采用人工上下料自动排线, 操作简单。

EZ semi-automatic winding machine, with manual loading& unloading bobbins and it's easy to operate.

主要技术参数 MAIN TECHNICAL PARAMETERS

项次	型号	MODEL NO.	EZRS16004	EZRS8006
1	主轴间距	Spindle pitch	160mm	80mm
2	主轴数	Spindle number	4	6
3	主轴方向	Spindle direction	顺时针/逆时针.360°/圈 Clockwise/counterclockwise.360°/Turn	
4	主轴转速	Spindle speed	8000rpm	15000rpm
5	三维行程	Traverse moving range	Y:85	
6	主轴伺服马达功率	Spindle servo motor power	750W	400W
7	适用线径	Wire range	0.03mm-0.5mm(>0.5mm, 只需增大电机功率可适用) (Increase the motor power can be applied to wider wire size)	
8	电源电压	Power voltage	AC 220V±10%	
9	功率	Power	1500W	
10	最大骨架外径	bobbin outer diameter (Max.)	150mm	75mm
11	快速夹具接口内径	Spindle diameter	12mm	10mm
12	压缩空气	Air pressure	0.4~0.6mpa	
13	主机尺寸	Machine size	800mm*900*1100mm	
14	主机重量	Machine weight	300kg	

可选装置介绍

OPTIONAL ACCESSORIES

前后上下左右式送料方式

BOBBIN LOADING TYPE OF FRONT & BACK, LEFT & RIGHT, UP & DOWN MOVEMENT

将放有空骨架的上料板前进--向上--后退卸出线圈成品，然后上料板左右移位-前进将空骨架插入治具下降后退回，线圈成品直接卸入上料板储物槽，上料板前进时骨架容易跌倒或滑出的情况下用此方法可以提高稳定性，可增加内置缓冲装置。

注：该装置要求骨架宽度必须小于主轴间距的一半。

On the fixture there is a position for emptying bobbin and wound bobbin. The fixture move forward, upward, backward to unload the coils, then move left & right, forward to insert the emptying bobbin into the fixture, then move backward after the fixture descends, then coils will be unloaded into storage box.

Notes: The condition for using this unit is width of bobbin must be less than half of the spindle pitch.



前后上下式送料方式

BOBBIN LOADING TYPE OF FRONT & BACK, UP & DOWN MOVEMENT

将放有空骨架的上料板前进后直接插入治具，然后上料板下降再退回，卸线圈成品采用滑梯式，上料板前进时骨架容易跌倒或滑出的情况下用此方法可以提高稳定性，可增加内置缓冲装置。

Load the bobbins from fixture to winding jigs by fixture movement front & back, then fixture move down and backward, coils unloading by slipping type. By adding buffer device, bobbin dropping or slip-out during fixture moving forward can be avoid.



前后式送料方式

FRONT & BACKWARDS BOBBIN LOADIN IT

通过下料片将线圈成品推出卸料，再将放有空骨架的上料板前后直接插入治具，上料板内置缓冲装置，卸骨架是用滑梯式，简单快捷。

Finished coils unloading by unloading slices, empty bobbins load to winding jigs by fixture, there's buffer device for stable forward movement, coils unloading by slipping, simple and fast.



固定式接料盒

FIXED UNLOADING BOX

有利于下料时产品各自按槽分开，避免了线圈因相互碰撞而造成断线或碰伤等现象。

It's better avoid coils crashing or damaging during unloading.

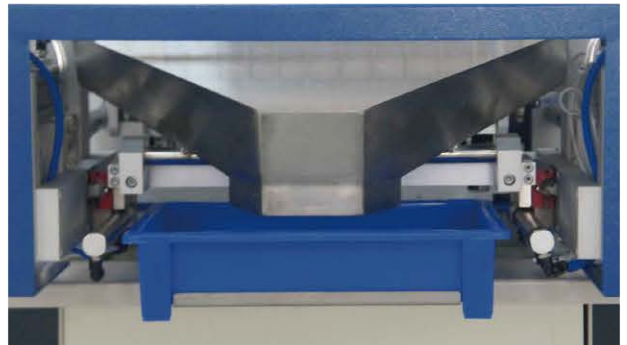


交换式接料盒

SWITCHABLE UNLOADING BOX

适用于周期短且体积小或耐压等级不高的产品。

It's capable for short cycle time, small size and low voltage degree product.



自动送线装置

WIRE FEEDER

亦称张力器衰减器，在做一些特殊的过槽等高难度动作时，可以使用此装置主动送线来达到目的。

The wire feeder is also called tension attenuator, when doing some special slot wiring or high precision wiring process. This unit can be used for sending wire forwardly.



压线装置

WIRE PRESSING DEVICE

适用于在绕线结束时,为了让骨架缠脚精确入槽,或要求结尾时铜线必须与骨架的边缘垂直的产品,需要采用此装置压住铜线后再进行端子的缠绕。

In the end of the winding, in order to make wiring accurately into slot, or need to keep wire end vertical with bobbin margin, this device is required for pressing wire before pin wrapping.



夹线装置

WIRE CLAMPING DEVICE

夹线装置有A型、T型两款,对于粗线产品可以进行开槽处理,以满足不同产品要求。

There're A type and T type for wire clamping device. For bigger wire size we can make the notch on the device.



脱漆装置

WIRE STRIPPING DEVICE

有利于产品在进行骨架缠脚前线径较粗的漆包线需要脱漆后进行缠脚连接增强。

It's used for thick wire coating removing before pin wrapping.

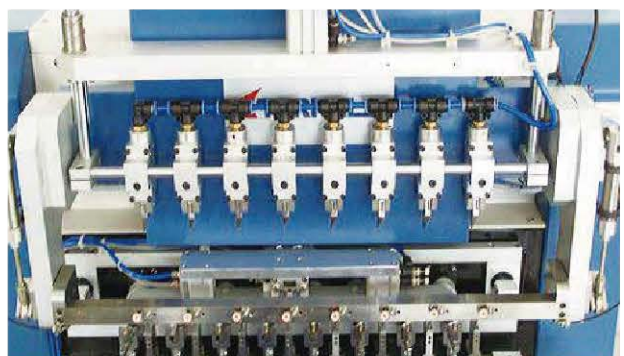


气动剪刀装置

PNEUMATIC WIRE CUTTER DEVICE

在中粗线及多股线不易扯断的情况下,可选用该装置做头尾线处理。

It's difficult for thick wire and strand wire breaking by pulling, using pneumatic wire cutter device for better wire end processing.



骨架到位检测装置

BOBBIN CHECKING DEVICE

亦称骨架浮起检测装置，使用改装置可以检测到没插到位的骨架，机器及时报警并停机，可有效防止导针被打断。

This device is for detecting if bobbin well loaded to winding jigs, if not machine will alarm and stop, it will better avoid nozzle broken.



包胶装置

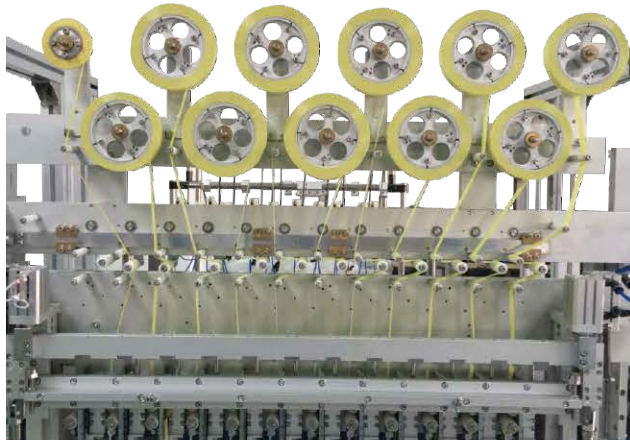
TAPING DEVICE

可使骨架直接在绕线机上进行包胶带，能重复进行，包胶后可再次绕线后进行包胶，以此重复使用。

This device is for tapping on winding machine repeatedly after each winding process.



贴包式



滚轮式



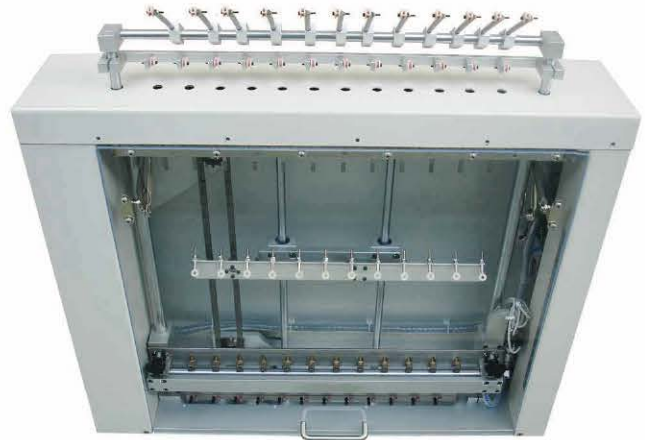
拉包式

绞线装置

AUTOMATIC WIRE TWISTING MACHINE

针对解决微细线在绕线过程中易断线之困扰所研发，其操控简便，性能优越。

Automatic wire twisting machine is developed for the problem of disconnection of micro wire in process of winding. It is easy to operate with superior performance

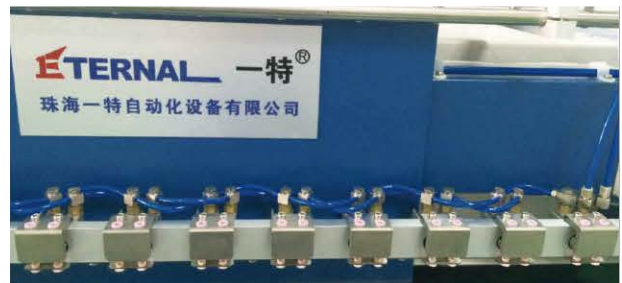


第三夹持线装置

3RD WIRE HOLDING UNIT

亦称AB交替绕线装置，A线绕完第一绕组以后，通过此装置夹持固定，切换B线进行下一组绕组绕制。该装置适用于绕制多个绕组仅有两种线径的产品，双线交替时间约为5S每次，特别适用于高低频电子变压器。

Also called AB alternating winding device, after first winding of A wire, through this device to clamp the A wire then switching to B wire for the next winding. This device is suitable for coil with two kinds of wire diameter, and the time switching wire is about 5S, it is especially suitable for the high frequency transformer coil.



被动中心顶杆装置

TAILSTOCK DEVICE

被动中心顶杆主要有两种类型，第一种是利用治具本体和治具芯的组合来达到压住骨架的目的，可以避免因为绕线的张力使得绕线后骨架变宽的现象，此装置的应用要根据骨架的形状而定；第二种是在机器上装有前后可以移动的顶杆机构，在绕线时前进并顶住骨架，绕完线以后即后退松开。

There're mainly 2 types, one is combination of winding jig and core of winding jig for pressing bobbin to avoid bobbin getting wider due to winding tension, this type of tailstock is defined by shape of bobbin. The other type of tailstock is device equipped on machine, it press bobbin during winding and loosen bobbin after winding.





电子张力器/Electronic Tensioner

ETA系列电子张力器具备如下特点:

- 1.通过励磁电流进行张力控制,自动控制精度可达 $\pm 2\%$,张力稳定,可适应高速绕线,并带张力闭环控制功能;
- 2.多种张力设置功能,可随着输入信号的切换使输出张力迅速改变(其输出值等于对应设置值),达到智能控制的目的;
- 3.远程数据采集、控制功能,可通过RS485通讯方式,实现张力曲线与数据的实时监控。

Features of ETA Series Electronic Tensioners:

1. The tension is controlled by excitation current with accuracy $\pm 2\%$ in Auto mode. It provides stable tension under high speed wiring and closed-loop tension control is possible.
2. Different types of tension setting: The output tension can be altered rapidly (output tension is reference to the setting value) by switching the signal input so that intelligent control is achieved.
3. Remote control and data collection through the RS485 communication port to monitor the real time data and result curves.

张力器
TENSION

规格参数 SPECIFICATIONS



型号 TYPE	张力范围 Tension range (g)	参考使用线径(mm) Wire diameter range (mm)
ETA-100L-L/LD	10-100	$\phi 0.04 - \phi 0.12$
ETA-200L-L/LD	15-200	$\phi 0.06 - \phi 0.16$
ETA-300L-L/LD	30-300	$\phi 0.08 - \phi 0.25$

伺服张力器/Servo Tensioner

EQS系列由传统的被动送线方式改变成主动送线方式,与机械张力器、磁力张力器相比张力更加稳定,其张力值范围为2g-2000g并自带反馈张力稳定系统,能自动实现张力稳定平衡。

Unlike traditional tensioning methods, servo tensioner feed the wire automatically. Compare with mechanical or magnetic tensioner, it is more stable. The tension can be set from 2.0g to 2000g, with feedback tension stabling system which can realize the tension balance automatically.

规格参数 SPECIFICATIONS



型号 TYPE	张力范围 Tension range (g)	参考使用线径(mm) Wire diameter range (mm)
EQS02-800IL	2-800	$\phi 0.02 - \phi 0.40$
EQS02-800IIL	2-800	$\phi 0.02 - \phi 0.40$
EQS300-2000IILD	300-2000	$\phi 0.20 - \phi 0.80$

磁力张力器/Magenetic Tensioner

EQZ系列磁力式张力器 EQZ MAGNETIC WITH ATTENUATION TENSIONER

EQZ 系列是通过磁场转换扭矩变化产生阻尼, 无机械摩擦, 因此能长期产生稳定张力, 且精度能得到有效保证。能自由地调整反张力, 可以适应方型骨架的绕线和急剧变化绕线速度的绕线, 不会产生断线。断线和线材用完时, 由装备的断线检出装置通知, 绕线机自动停止。

EQZ series is produced by the change of the torque of the magnetic field, which is produced by the change of the torque, which has no mechanical friction, so it can generate stable tension for a long time, and the precision can be guaranteed effectively. Anti-tension can be adjust freely, it can be adapted to the square bobbin winding and sharp changes in the winding speed and avoid wire break. When the wire is broken or wire is used up, tensioner will detect it and stop the winding machine automatically.

规格参数 SPECIFICATIONS



型号 TYPE	张力范围 Tension range (g)	参考使用线径(mm) Wire diameter range (mm)
EQZ04-100IL	4-100	0.025-0.12
EQZ14-400IL	14-400	0.06-0.30
EQZ50-900IL	50-900	0.10-0.50

EQZ气动磁力式张力器 EQZ PNEUMATIC MAGNETIC TENSIONER

EQZ系列(带衰减装置)通过磁场转换扭矩变化产生阻尼, 无机械摩擦, 因此能长期产生稳定张力, 且精度能得到有效保证。能自由地调整反张力, 可以适应方型骨架的绕线和急剧变化绕线速度的绕线, 不会产生断线。断线和线材用完时, 由装备的断线检出装置通知, 绕线机自动停止。新增气动衰减装置, 更适合PIN脚的零张力快速缠绕。

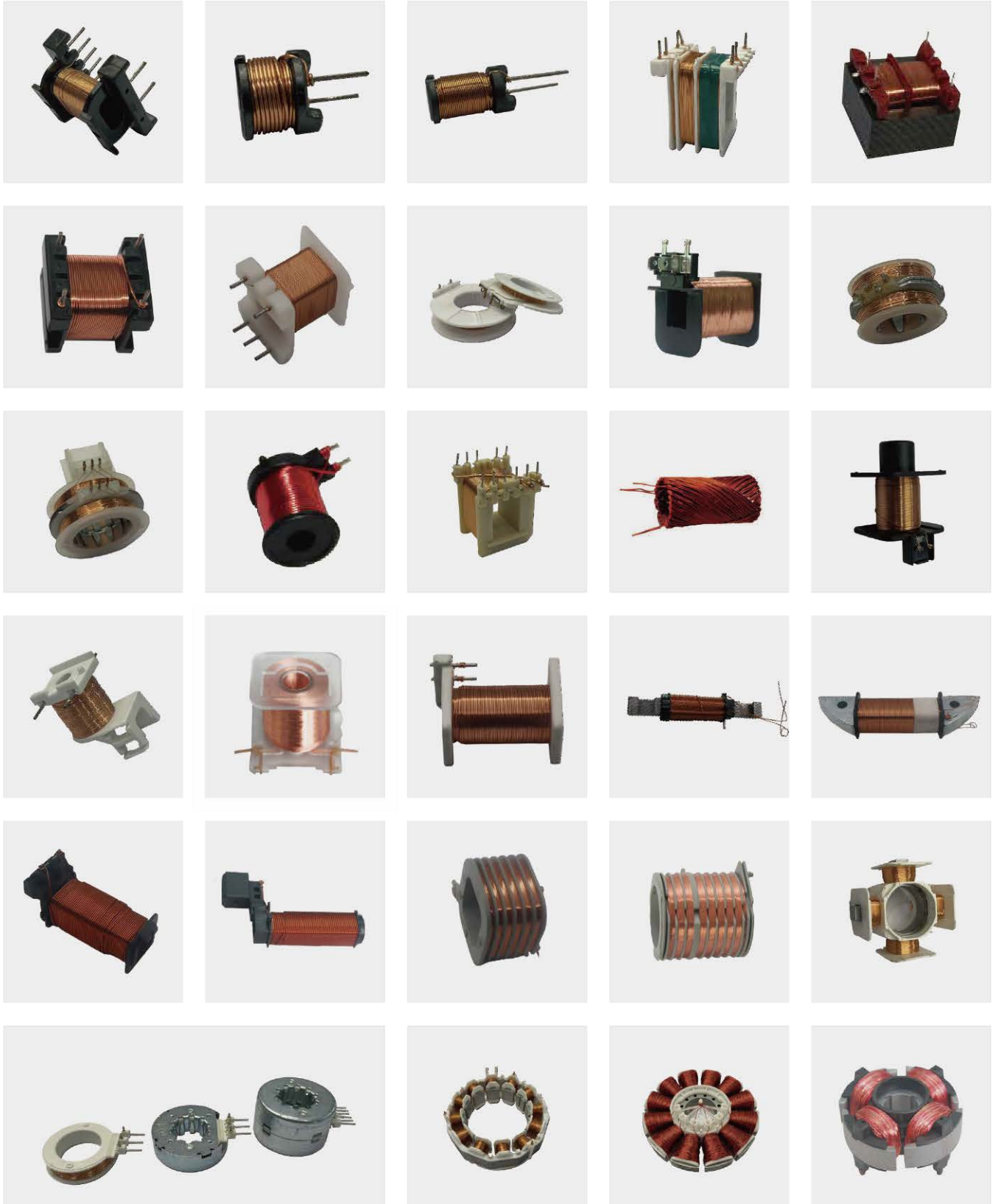
EQZ series (with the attenuation device) through the magnetic field to change the torque variation of the damping, no mechanical friction, so that the long-term stability of tension, and the accuracy can be effectively guaranteed. Can freely adjust the anti tension, can adapt to the square frame of the winding and sharp changes in the winding speed of the winding, will not produce a broken line. Wire break and rum outl, broken by the equipment line detetion device notification, automatic stop winding machine. New pneumatic damping device, zero tension is more suitable for PIN foot fast winding.

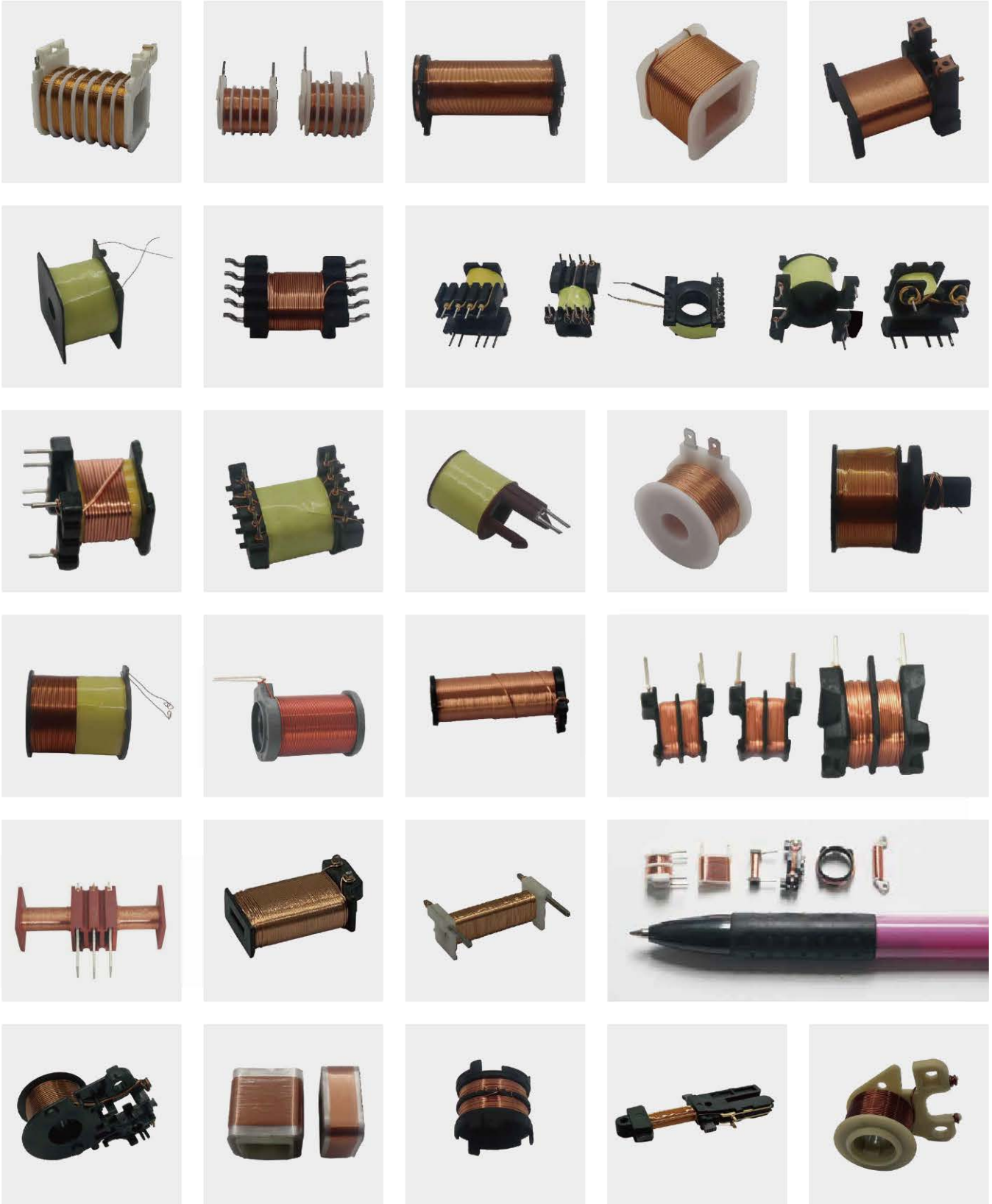
规格参数 SPECIFICATIONS

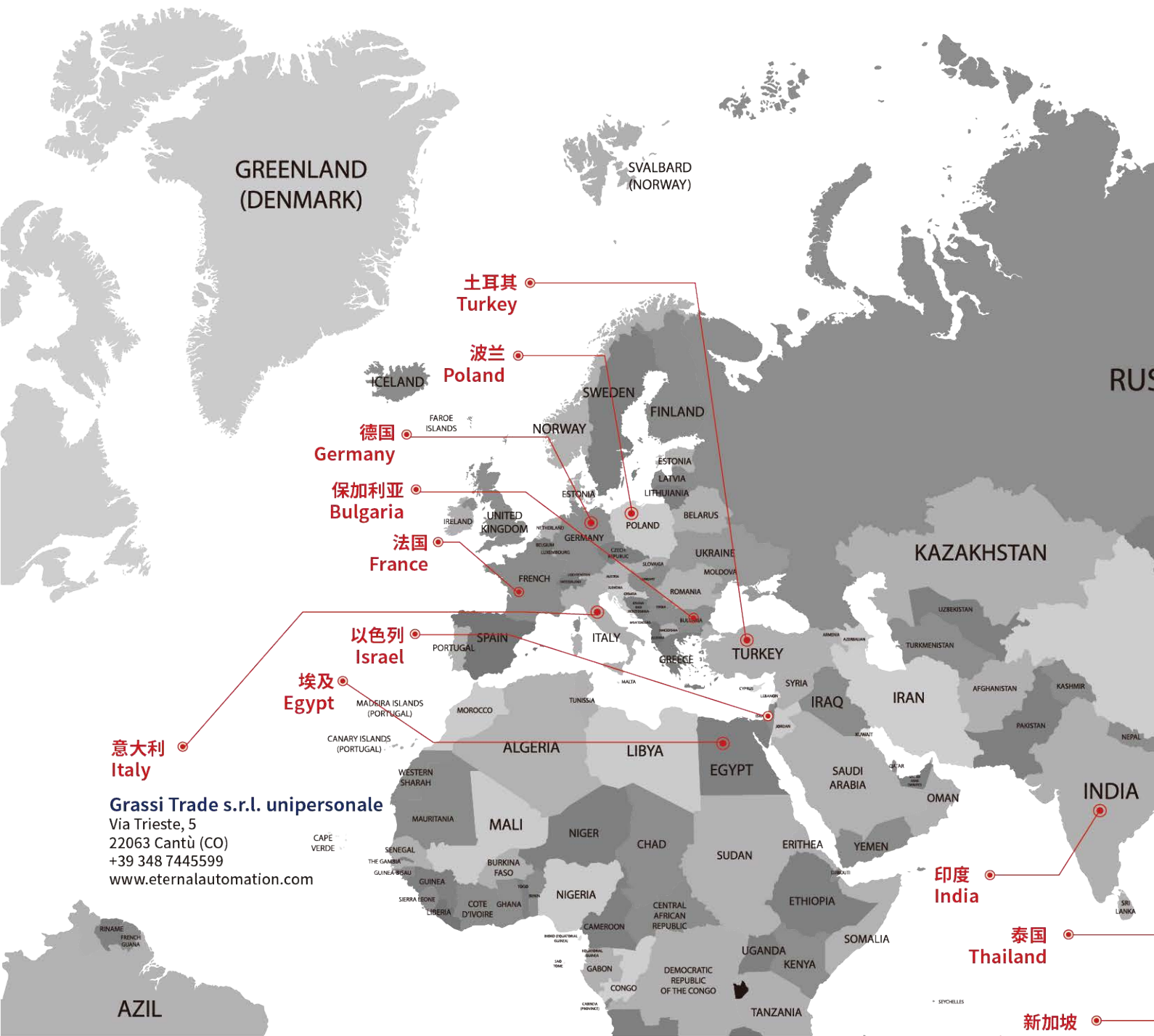


型号 TYPE	张力范围 Tension range (g)	参考使用线径(mm) Wire diameter range (mm)
EQZ04-100II	4-100	0.025-0.12
EQZ14-400II	14-400	0.06-0.30
EQZ50-900II	50-900	0.10-0.50
EQZ300-1500II	300-1500	0.25-0.80
EQZ400-2000II	400-2000	0.30-1.00

线圈样图 SAMPLE







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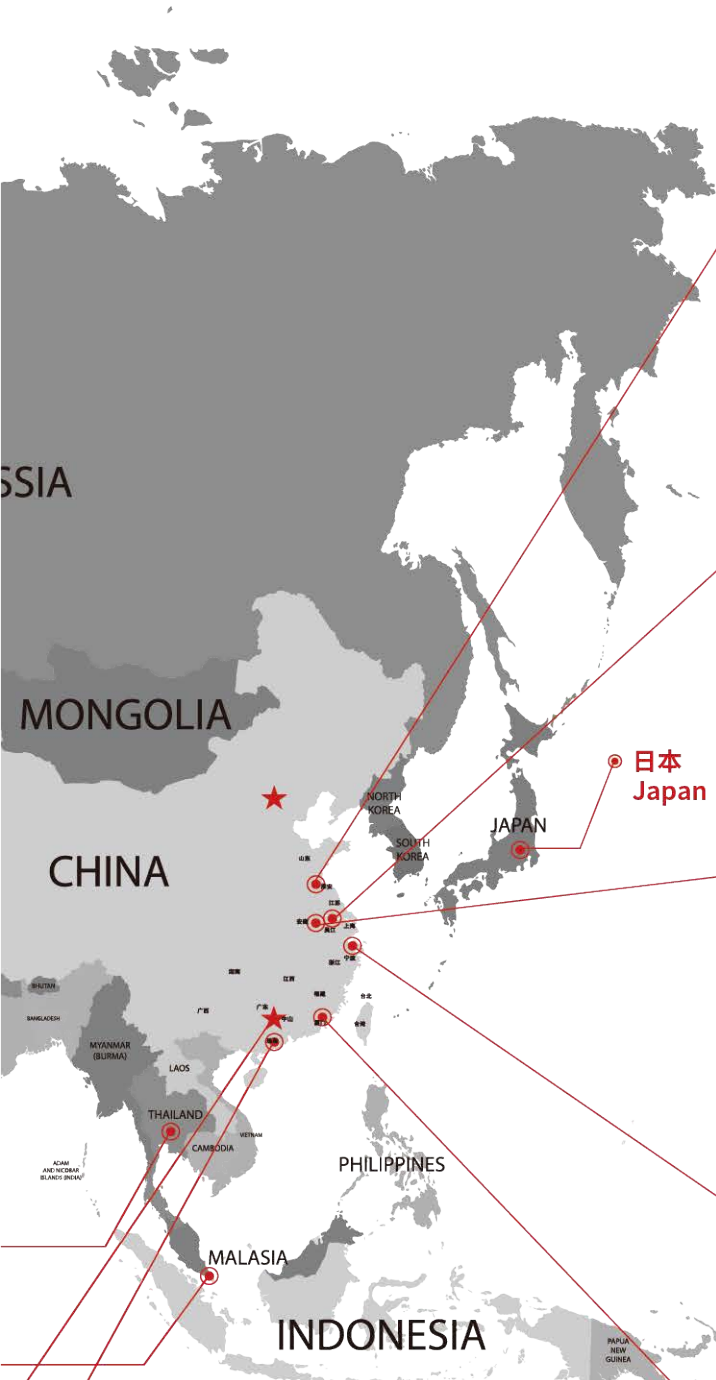
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