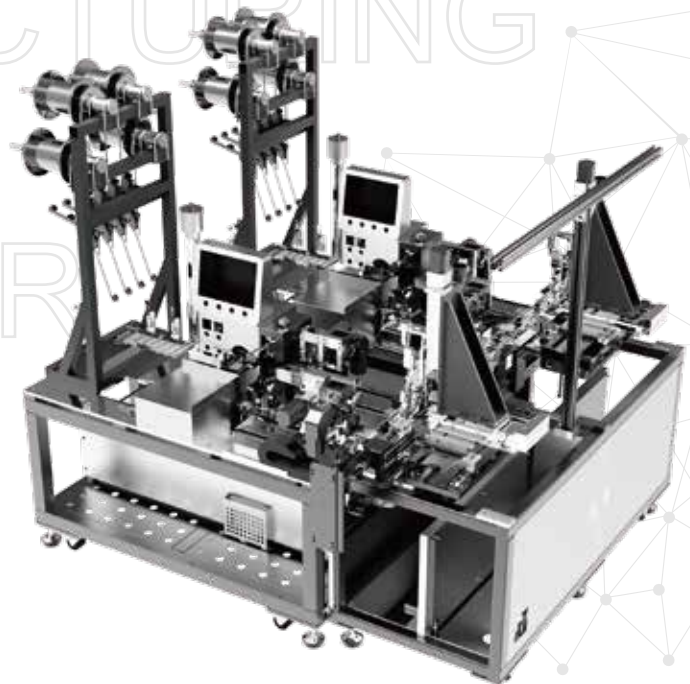




智能制造系统提供商

INTELLIGENT  
MANUFACTURING  
SYSTEM  
PROVIDER



## LIST OF LASER SERIES EQUIPMENT

### 激光设备综合型录

CUTTING / 切割

WELDING / 焊接

MARKING / 打标



## 深圳市艾姆克斯科技有限公司 Shenzhen Aimkse Techonology Co,LTD

深圳市艾姆克斯科技有限公司成立于 2015 年，专注智能制造领域，是一家集研发，生产、销售一体的国家高新技术企业，智能制造系统提供商，旗下控股有东莞市东涛实业有限公司和湖北东涛实业有限公司两家全资子公司。公司拥有数字化高速高精运动系统、高水平直驱技术和多轴联动数控系统三大技术平台，率先研发出直驱五轴联动数控加工中心、直驱五轴精雕机、五轴联动点胶机，属国内首创，填补市场空白。公司其它主要产品还包括高精度直线电机、DD 马达、智能检测循环线系统、五轴激光机、智能全自动组装平台等。艾姆克斯致力于为客户创造价值，秉承“闯”“创”“干”精神，持续创新，以自动化、数字化、智能化为核心，从实际产业需求出发，提供技术先进、性能卓越的产品，打破国际垄断，实现国产替代，为全球制造企业提供专业完善且超高性价比的智能制造系统方案。

Shenzhen Aimkse Technology Co.Ltd. was founded in 2015, focusing on the field of intelligent manufacturing, it is a R&D, production, sales in one of the national high-tech enterprises and intelligent manufacturing system provider, and holdings are Dongguan Dongtao Industrial Co., Ltd. and Hubei Dongtao Industrial Co., Ltd. two wholly-owned subsidiaries. Aimkes has three technology platforms: digital high-speed and high precision motion system, high level direct drive technology and multi-axis linkage CNC system, it is the first to develop direct drive five-axis linkage CNC machining center, direct drive five-axis precision engraving machine and five-axis linkage dispensing machine, which is the first in China and fills the market gap. Aimkes's other main products include high precision linear motor, DD motor, intelligent detection cycle line system, five axis laser machine, intelligent automatic assembly platform, etc. Aimkes is committed to creating value for customers, adhering to the spirit of "break though", "innovation" and "hard work", the company continues to innovate, from the actual needs of the industry, to provide advanced technology, excellent performance products, breaking international monopolies, achieving domestic substitution, and providing professional, comprehensive, and highly cost-effective intelligent manufacturing system solutions to global manufacturing enterprises.

# FOLLOW THE TREND OF INDUSTRY AND ACHIEVE WIN-WIN COOPERATION

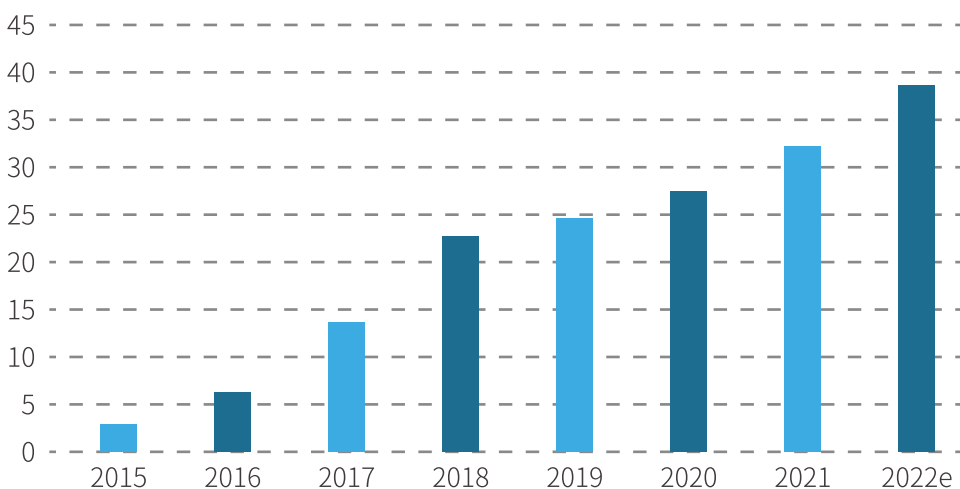
## 顺应产业趋势, 实现协同共赢

### 市场前景/Market prospect

全球经济的回暖, 制造业投资明显加速, 智能制造升级转型, 激光设备、工业自动化等行业热度不断提升, 激光加工技术凭借速度快、精度高、加工质量好等优势逐步替代传统加工手段, 在各行业将占据更重要的地位。

The global economic recovery has significantly accelerated investment in manufacturing, upgraded and transformed intelligent manufacturing, and increased the popularity of laser equipment, industrial automation and other industries. Laser processing technology with fast speed, high precision, good processing quality and other advantages gradually replace the traditional processing means, will occupy a more important position in various industries.

中国超快激光器市场规模: 亿元 (含进口)  
China's laser market is growing fast; Hundred million (including import)



\* 资料来源: 光电汇, 2022 中国激光产业发展报告



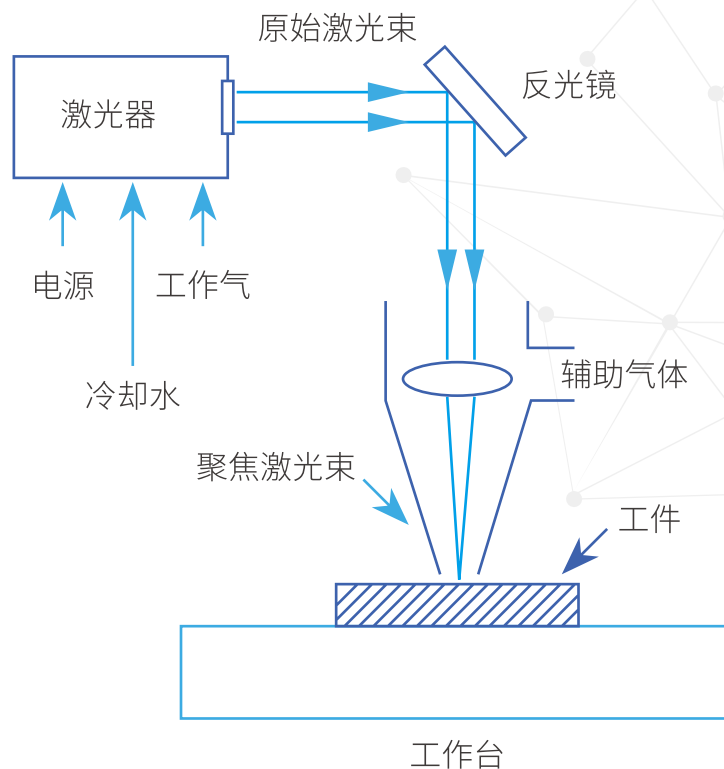
# LASER MACHINE TECHNOLOGY AND EQUIPMENT

## 激光机技术与装备

### 技术原理/Technical Principles

激光是 20 世纪以来继核能、电脑、半导体之后，人类的又一重大发明，被称为“最快的刀”、“最准的尺”、“最亮的光”。激光机是利用高强度的激光束，经光学系统聚焦后，通过激光束与加工工件的相对运动来实现对材料（包括金属与非金属）进行加工的一门技术，广泛地应用于切割、蚀刻、焊接及精细微处理等诸多工业生产领域，目前已成为一种新型制造技术和手段，被誉为“永不磨损的万能加工工具”。

After nuclear energy, computer, semiconductor since the 20th century, laser is another major invention of mankind, known as "the fastest knife", "the most accurate ruler", "the brightest light". Laser machine is the use of high intensity laser beam, after the optical system focusing, through the relative motion of the laser beam and processing workpiece to realize the material (including metal and non-metal) processing technology, widely used in cutting, etching, welding and fine processing and many other industrial production fields, has become a new manufacturing technology and means, known as "never wear universal processing tools".



# FIVE-AXIS LASER MACHINE

## 五轴激光机

### 产品介绍/Product Introduction

五轴激光机是一款高精度、高效率的切割设备，采用先进的激光技术和智能控制系统，具有切割速度快、精度高、耐用性强等特点，可满足不同客户的需求；适用于各种金属、塑料、陶瓷等材料的切割，以实现高效、精准的切割，大大提高了生产效率。

Five-axis laser machine is a high-precision, high-efficiency cutting equipment, using advanced laser technology and intelligent control system, with cutting speed, high precision, strong durability and other characteristics, can meet the needs of different customers; Five-axis laser machine can be used for cutting all kinds of metals, plastics, ceramics and other materials, in order to achieve efficient and accurate cutting, greatly improve the production efficiency.



### 技术优点/Technical advantage

- ▶ 一体化设计，结构合理、安全可靠、五轴直线电机平台，进口切割头、可搭载任意厂家的光纤激光器；
- ▶ 视觉定位系统采用超高品质相机作路径引导及质量监测，综合精度可达 0.005mm。
- ▶ 直线运动控制精度可达到  $\pm 0.5\mu\text{m}$ ，速度可以达到 6m/s，旋转运动速度 300-28000RPM 可选，转角重复精度  $\pm 1''$ ，实现高速高精度工作要求。
- ▶ Integrated design, reasonable structure, safe and reliable, five-axis linear motor platform, imported cutting head, compatible with fiber lasers from any manufacturer;
- ▶ The vision positioning system uses ultra-high quality camera for path guidance and quality monitoring, comprehensive accuracy up to 0.005mm.
- ▶ Linear motion control accuracy can reach  $\pm 0.5\mu\text{m}$ , speed can reach 6m/s. The rotation speed is optional between 300 and 28000RPM, and the rotation angle repetition accuracy is  $\pm 1\text{arcsec}$ , which can realize the high speed and high precision working requirements.

### 产品特点/Product feature

- ▶ 精准、可靠、操作便捷的激光切割机；
- ▶ 五轴多维作业，自动上料、筛选、标记、切割于一体；
- ▶ 全封闭防护，减少粉尘污染；
- ▶ 采用高端激光器，速度快，精度高、无耗材。
- ▶ Accurate, reliable, easy to operate laser cutting machine;
- ▶ Five-axis multi-dimensional operation, automatic loading material, screening, marking, cutting in one equipment;
- ▶ Fully enclosed protection to reduce dust pollution; accuracy, and no consumables;
- ▶ Adopt high-end laser, high speed, high precision, no consumables.

## 产品参数/Product parameters

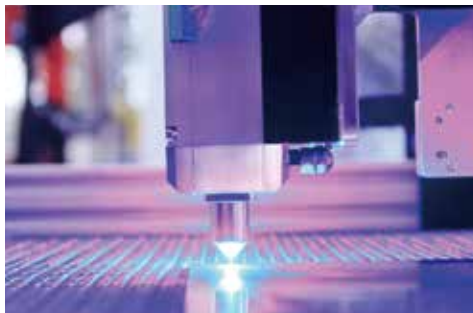
### AGJ-A135

可根据需求定制

部件名称	X轴	Y轴	Z轴	A轴	C轴
行程	400mm	400mm	150mm	±135°	360°
定位精度	±3μm	±3μm	±5μm	±15"	±15"
分辨率	0.1 um	0.1 um	多摩川23位	单圈24位	单圈24位
重复定位精度	±0.001mm	±0.001mm	±0.005mm	±0.005°	±0.005°
直线度	≤3μm	≤3μm	0.01mm	/	/
平面度	≤10μm	≤10μm	≤10μm	≤10μm	≤10μm
最大速度	1000mm/s	1000mm/s	500mm/s	360RPM	500RPM
最大加速度	1g	1g	0.5g	200 rad/s <sup>2</sup>	200 rad/s <sup>2</sup>
最大连续推力	440N	1200N	50N	43.56N.m	6.5 N.m
负载能力	30Kg	100Kg	5Kg	15kg	5Kg
其他要求					
激光器	SPI/IPG/创鑫/锐科/杰普特				
用电需求	AC220V 50/60HZ 25A				
速度波动	实际1%以内				
设备尺寸	LWH:1300*1300*1900mm				
最大负载	5kg				
最大加工范围	400*400mm				
机器重量	1.8t				

\*因技术改进, 以上数据如有更改, 以产品技术文件为准。

Due to technical improvement, if any of the above data is changed, the product technical documents shall prevail.



## 应用领域/Application field

- ▶ 高速高精度的精细微加工：如 FPC、PCB、和各类薄膜切割；
  - ▶ 元器件领域：IT 塑料构件等非金属材料的精密切割；
  - ▶ SMT 钢网切割，各种薄金属板精密切割、微孔加工、金属零件切割；
  - ▶ 氧化铝、氮化铝、氧化锆等材质的陶瓷基板、陶瓷线路板、陶瓷元器件的切割
- ▶ High speed and high precision processing: such as FPC, PCB, and all kinds of thin film cutting;
  - ▶ Components field: precision cutting of non-metallic materials such as IT plastic components;
  - ▶ SMT steel mesh cutting, all kinds of thin metal plate precision cutting, micro-hole processing, metal parts cutting;
  - ▶ Alumina, aluminum nitride, zirconia and other materials of ceramic substrate, ceramic circuit board, ceramic components cutting.

# LASER TIN BALL JET TIN-WELDING MACHINE

## 激光锡球喷射焊锡机

### 产品介绍/Product Introduction

激光通过光纤传输，输出口安装于锡球出口上方，在环形腔体上放置有供高压气进入的入口，通过激光融化锡球，然后高压惰性气体可保证有足够的压力将熔化的锡球滴落，又可以保证熔化的焊锡不会被氧化，焊接精度高，焊接效果好，尤其适用于极高精度的焊锡需求。

Laser trans misses through the optical fiber ,outlet installed in tin ball over ,exports and placed on the annular cavity for high pressure gas entering the entrance, with a laser melted tin ball ,then high-pressure inert gas can ensure there is enough pressure for molten solder ball dripping ,meanwhile ensure the molten solder will not be oxidaized high precision of soldering the soldering quality is good especially suitable for high accuracy of soldering requirements .



### 技术优点/Technical advantage

- ▶ 加热、熔滴过程快速，可在 0.2s 内完成；
- ▶ 在焊嘴内完成锡球熔化，无飞溅；
- ▶ 不需助焊剂、无污染，最大限度保证电子器件寿命；
- ▶ 锡球直径最小 0.1mm，符合集成化、精密化发展趋势；
- ▶ 可通过锡球大小的选择完成不同焊点的焊接；
- ▶ 焊接质量稳定，良品率高；
- ▶ 配合 CCD 定位系统适合流水线大批量生产需求。
- ▶ Rapid heating and melting process can be completed within 0.2s;
- ▶ Tin ball is melted in the nozzle without spatter;
- ▶ No flux, no pollution, to ensure the maximum life of electronic devices;
- ▶ The minimum diameter of tin ball is 0.1mm, which accords with the development trend of integration and precision;
- ▶ Different solder joints can be welded by selecting the size of the tin ball;
- ▶ Stable welding quality, high yield;
- ▶ With CCD positioning system suitable for mass production line demand;

### 产品特点/Product feature

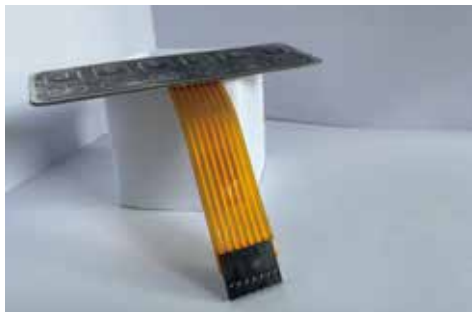
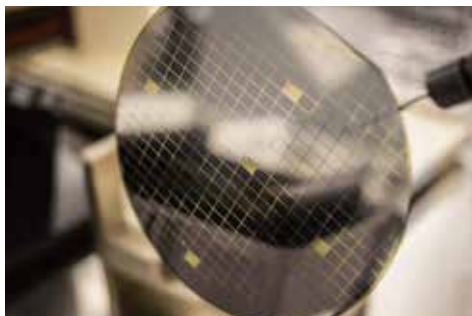
- ▶ 适用于高精度焊接，精度 +10 $\mu$ m，产品最小间隙1000 $\mu$ m；
- ▶ 锡球范围可供选择范围大，直径 0.1mm-1.8mm；
- ▶ 应用于镀锡、金、银的金属表面，良率 99% 以上；
- ▶ Suitable for high precision welding, precision can reach +10 $\mu$ m and the minimum clearance of the product 1000 $\mu$ m;
- ▶ Tin balls are available in a wide range of sizes, with diameters ranging from 0.1mm to 1.8mm;
- ▶ Applied to tin, gold, silver metal surface, yield more than 99%



## 产品参数/Product parameters

### AGJ-P140

可根据需求定制



机器外形尺寸	1000x1100x1650mm
载盘尺寸	200x150mm( 可定制 )
运动控制方式	PLC+PC visual
激光功率范围	50-200W( 可选 )
激光波长	1064±5nm
电源最大功耗	2kw
重复定位精度	±0.002mm
锡球范围	Φ 0.1mm-1.8mm
总重量	550kg
视觉定位系统	±5μm
电源	AC220V15A
压缩气	0.6MPa
氮气消耗量	1m <sup>3</sup> / H
激光器	SPI/IPG/创鑫/锐科/杰普特

\*因技术改进，以上数据如有更改，以产品技术文件为准。  
Due to technical improvement, if any of the above data is changed, the product technical documents shall prevail.

## 应用领域/Application field

- ▶ 微电子行业：高清摄像模组、手机数码相机软板连接点焊接、精密声控器件、数据线焊点组装焊接、传感器焊接；
- ▶ 军工电子制造行业：航空航天高精密电子产品焊接；
- ▶ 其他行业：晶圆、光电子产品、MEMS、传感器生产、BGA；HDD(HGA, HSA) 等高精密部件、高精密电子的焊接。
- ▶ Micro-electronics industry: HD camera module, mobile phone digital camera soft plate connection point welding, precision voice control devices, USB cable welding spot assembly welding, sensor welding;
- ▶ Military electronics manufacturing industry: welding of high precision electronic products for aerospace industry;
- ▶ Other industry: wafer, optoelectronic products, MEMS, sensor production, BGA. Welding of high precision components such as HDD (HGA, HSA) and high precision electronics.



# LASER TIN BALL WELDING MACHINE

## 激光锡球焊接机

### 产品介绍/Product Introduction

激光锡球焊是一种高精度、高效率的自动化焊接设备，全新的锡焊贴装工艺，能实现极小尺寸的互连，熔滴大小可小至几十微米，将容器中的锡球通过特制的单锡珠分球系统转移至喷射头，通过激光的高脉冲能量，瞬间熔化置于喷射头上的锡球，再利用惰性气体压力将熔化后的锡料，喷射到焊点表面，形成互联焊点。

Laser tin ball welding is a kind of high-precision and high-efficiency automatic welding equipment, is a new soldering process, can realize the interconnection of extremely small size, the size of the molten drop can be as small as tens of microns. The tin ball in the container can be transferred to the position of the injection head through the special single-tin bead ball splitting system. The high pulse energy of the laser can instantly melt the tin ball located in the injection head, and then the inert gas pressure can be used to spray the melted tin material to the surface of the solder joint to form the interconnected solder joint.



### 技术优点/Technical advantage

- ▶ AMKSJG 系列激光器效率高、可靠性、免维护的高功率激光器系列，采用风冷方式，波长范围 1800nm~2100nm，激光器效率 >25%。
- ▶ 视觉定位系统采用超高品质相机作路径引导及质量监测，且可根据实际需求选配相机，瑕疵检测和综合精度可达 0.005mm。
- ▶ 直线运动控制精度可达到  $\pm 0.5\mu\text{m}$ ，速度可以达到 6m/s，旋转运动速度 300-28000RPM 可选，转角重复精度  $\pm 1''$ ，实现高速高精度工作要求。
- ▶ AMKSJG series laser are of high efficiency, high reliability, maintenance-free high power laser series, using air cooling technology, it operates at the wavelength range between 1800nm to 2100nm with an laser efficiency greater than 25%;
- ▶ The visual positioning system uses ultra-high quality camera for guidance and quality monitoring, with the option to select cameras based on needs. It can achieve defect detection and overall accuracy up to 0.005mm;
- ▶ Linear motion control accuracy can reach  $\pm 0.5\mu\text{m}$ , speed can reach 6m/s. The rotation speed is optional between 300 and 28000RPM, and the rotation angle repetition accuracy is  $\pm 1\text{arcsec}$ , which can realize the high speed and high precision working requirements.

### 产品特点/Product feature

- ▶ 高精度：保证焊接精度达到微米级别；
- ▶ 高效率：一次焊接时间通常只需几秒钟，生产效率高；
- ▶ 环保性：设备运行过程中无烟尘、无有害气体排放，符合环保要求；
- ▶ 可靠性：设备经过严格的质量控制和测试，具有良好的可靠性和稳定性。
- ▶ High precision: Ensure that the welding accuracy reaches the micron level;
- ▶ High efficiency: a welding time usually only a few seconds, high production efficiency;
- ▶ Environmental: no smoke or harmful gas is emitted during the operation of the equipment, which meets the requirements of environmental protection;
- ▶ Reliability: after strict quality control and testing, the equipment has good reliability and stability.



## 产品参数/Product parameters



### AGJ-P160

可根据需求定制

机器外形尺寸	2060*800*1780mm	电源最大功耗	AC185-265V/1500W
运动行程 (X*Y*Z)	500*555*60mm	重复定位精度	±0.002mm
运动控制方式	工控机/PLC	锡球范围	Φ 0.1mm-1.8mm
驱动方式	直线电机	总重量	850kg
机器轴数	26	激光光源种类	光纤
激光功率范围	0-300W	最小焊接间距	0.2mm
最大移动速度	2000mm/s	环境温度	0-40°C (不冻结)
激光器	SPI/IPG/创鑫/锐科/杰普特		

\*因技术改进, 以上数据如有更改, 以产品技术文件为准。  
Due to technical improvement, if any of the above data is changed, the product technical documents shall prevail.

## 应用领域/Application field

- ▶ 精密电子元件: 电子烟、DIP 封装元器件、喇叭和马达、如电容器、可变电阻器、LCD、磁头、连接器、发动机、变压器等;
  - ▶ 医疗领域: CT、核磁共振、DR 系统、CR、直线加速器等医疗设备;
  - ▶ 新能源领域: 新能源汽车、太阳能照明领域、风能发电系统等领域;
  - ▶ 电子产品: 如 VR 眼镜、照相机、摄像头、电子钟表、液晶 TV、音频设备、汽车导航系统等产品;
  - ▶ 高端领域: 航天、航空、国防、汽车和高端通信等行业;
  - ▶ 半导体产品: LSI、IC、混合 IC、CSP、BGA 等。
- ▶ Precision electronic component: e-cigarettes, DIP package components, horns and motors, such as capacitors, variable resistors, LCD, magnetic heads, connectors, engines, transformers and so on;
  - ▶ Medical field: CT, nuclear magnetic resonance, DR System, CR, linear accelerator and other medical equipment;
  - ▶ New energy fields: new energy vehicles, solar lighting, wind power generation systems and other fields;
  - ▶ Electronic products; such as VR glasses, cameras, camera lens, electronic clocks, LCD TV, audio equipment, car navigation system and other products;
  - ▶ High-end sectors: aerospace, aviation, national defense, automotive, high-end communications and other industries;
  - ▶ Semiconductor product: LSI, LC, Mixed IC, CSP, BGA and so on.

# DOUBLE STATION LASER WIRE FEEDER WELDING MACHINE

## 双工位激光送丝焊接机

### 产品介绍/Product Introduction

双工位送锡丝激光锡焊机可实现自动送锡丝、激光熔锡焊接的整个工艺过程。精密破锡送丝机、半导体激光器和控制系统集成一体，能实现自动送锡丝，激光通过激光器光纤传输聚焦后，照射工件表面及锡丝上进行恒温熔锡，形成稳定可靠焊锡效果。该设备主要用于效率、精度要求不高、负载较轻的场合。根据产品焊接工艺的不同，可以搭配不同的配置，能够进行激光锡丝焊接、激光锡膏焊接和预上锡后激光焊接。

Double station laser wire feeder welding machine can realize the whole process of automatic wire feeding and laser soldering. Precision tin breaking wire feeding machine, semiconductor laser and control system integrated, can achieve automatic tin wire feeding, laser transmission through laser fiber focusing, irradiation on the workpiece surface and tin wire for constant temperature soldering, forming a stable and reliable soldering effect. The equipment is mainly used for efficiency, precision requirements are not high, light load occasions. According to the different product welding process, can be matched with different configurations, can be laser solder wire welding, laser solder paste welding and pre-tin laser welding.



### 技术优点/Technical advantage

- ▶ 双工位送锡丝激光锡焊，两个夹具交替往复进入工作台内部的焊接区，提高效率；
- ▶ 由半导体激光器、桌面式四轴工作台、视觉定位系统、独创的激光锡焊控制系统和精密送丝机构成；
- ▶ 系统采用触摸屏、工控机控制，系统对产品自动定位并焊接，操作方便简捷。
- ▶ Double station feeding wire laser tin welding, two fixture alternately reciprocating into the welding area inside the workbench, improve efficiency;
- ▶ It is composed of semiconductor laser, tabletop four-axis workbench, visual positioning system, unique laser tin welding control system and precision wire feeding mechanism.
- ▶ The system is controlled by touch screen and IPC, and system can automatically locates and welds the products, the operation is convenient and simple.

### 产品特点/Product feature

- ▶ 使用触摸屏作为人机操作界面，操作简单便捷；
- ▶ 设备可预存多组加热曲线参数，以适应不同的焊接对象；
- ▶ 可精确、快速调整加热曲线；
- ▶ 非接触焊接，隔绝静电对元器件的损害，无焊接过程接触应力，振动；
- ▶ 无焊头磨损情况，特别适合自动化应用场合，减少维护时间。
- ▶ The touch screen is used as the man-machine operation interface, the operation is simple and convenient;
- ▶ The equipment can prestore multiple groups of heating curve parameters to adapt to different welding objects;
- ▶ The heating curve can be adjusted accurately and quickly;
- ▶ Non-touch welding, isolation of electrostatic damage to components, no welding process contact stress, vibration
- ▶ No welding head wear condition, especially suitable for automation applications, reduce maintenance time;



## 产品参数/Product parameters

### AGJ-B140

可根据需求定制



名称	规格
焊接类型	锡膏   锡丝
设备外形尺寸 (mm)	920*1020*1800(不带报警灯)
激光器波长 (nm)	915
最大激光输出功率(W)	30/60/120/200 (可选配)
温度反馈	可选配
加工范围 (mm)	450*350
光纤芯径 (um)	105 (可选配)
电力需求	AC 220V /50Hz /10A
整机功率(KW)	1.5
激光位移传感器	可选配
定位方式	同轴视觉定位
最小光斑直径 (mm)	0.5
平台行程 (mm)	X=500、Y=400、Z=200
重复位置精度 (mm)	±0.02
冷却方式	风冷
激光器	SPI/IPG/创鑫/锐科/杰普特

\*因技术改进, 以上数据如有更改, 以产品技术文件为准。  
Due to technical improvement, if any of the above data is changed, the product technical documents shall prevail.

## 应用领域/Application field

- ▶ IT 行业: 手机摄像头模组焊接、手机背光灯焊接、数据线焊接、航空插头焊线、电脑显示屏 PCB 焊接、耳机插头焊接、音响 PCB 焊接等;
- ▶ 汽车行业: 微型电机焊接、车灯 PCB 板焊接、车载显示屏背光灯焊接、车载显示屏 PCB 焊线、仪表盘焊接等;
- ▶ 光通讯行业: 网口焊接、FPC 与 OSA 焊接、FPC 与 PCB 焊接、OSA 与 PCB 焊接、FPC 与 BOX 焊接、10G 模块 OSA 焊接、FPC 与 PCBA 焊接、BOX 与 FPC 焊接、PCB 与 BOSA 焊接等。
- ▶ IT industry: mobile phone camera module welding, mobile phone backlight welding, USB cable line welding, aviation plug welding, computer display screen PCB welding, headphone plug welding, audio PCB welding, etc.
- ▶ Automobile industry: micron-motor welding, car light PCB board welding, car display backlight welding, car display PCB welding line, instrument panel welding, etc.
- ▶ Optical communication industry: network port welding, FPC and OSA welding, FPC and PCB welding, OSA and PCB welding, FPC and BOX welding, 10G module OSA welding, FPC and PCBA welding, BOX and FPC welding, PCB and BOSA welding, etc.

# LASER MARKING MACHINE

## 激光打标机

### 产品介绍/Product Introduction

针对薄板型载具及产品配置流水线进行在线标记，根据客户流水线及产品宽度调整内部传动输送线宽度，来适配产品或载具的输送。CCD 检测识别，加工质量好，产品标识精度高。

For the thin plate type vehicle and product configuration line can be marked online, according to the customer pipeline and product width, adjust the width of the internal transmission line, to match the product or vehicle transportation. CCD detection and identification, high processing quality and high product marking accuracy.

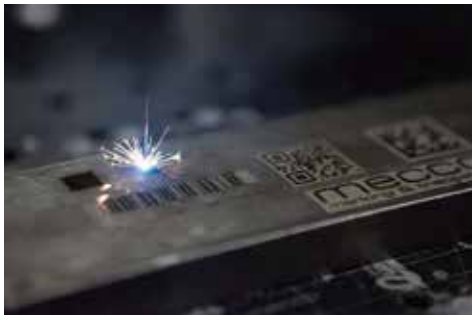


### 技术优点/Technical advantage

- ▶ 流水线在线进行二维码标记，兼容 UV、IR、CO2 多种光源；
- ▶ 配备条码枪实时读码并上传系统数据库；
- ▶ 采用 CCD 视觉定位，重复加工精度  $< 0.05\text{mm}$ ，最大 UPH: 1200；
- ▶ 可以镭雕微型、隐形二维码，最小二维码尺寸  $0.2 \times 0.2\text{mm}$ 。
- ▶ Production line for QR code marking, compatible with UV, IR, CO2 light sources;
- ▶ Equipped with barcode scanner real-time code reading and upload system database;
- ▶ CCD visual positioning, repeated machining accuracy is greater than  $< 0.05\text{mm}$ , Max UPC: 1200;
- ▶ Can laser engraving miniature QR code or invisible QR code, Min QR code size  $0.2 \times 0.2\text{mm}$ .

### 产品特点/Product feature

- ▶ 可对多种金属、非金属材料进行加工，尤其对高硬度、高熔点、脆性材料进行标记更显优势；
- ▶ 属于非接触加工、不损坏产品、无刀具磨损、标记质量好；
- ▶ 激光束细、加工材料消耗很小、加工热影响区小。
- ▶ Can be a variety of metal, non-metallic materials processing, especially for high hardness, high melting point, brittle materials marked more obvious advantages;
- ▶ It belongs to non-touch processing, no damage to products, no tool wear, good marking quality;
- ▶ The slender laser beam makes the processing material consumption is small and the processing heat affected zone is small.



## 产品参数/Product parameters

### AGJ-D160

可根据需求定制

项目	主要技术参数	
激光参数	激光波长	1064nm
	激光功率	20W
光学特性	标记标准线宽	0.06mm(视材料)@F=160
	最小字符高度	0.2mm @F=160
机械系统	加工软件	自主研发操作系统，操作便捷
	视觉系统	千万级视觉系统，自主研发，为客户专业定制方案
	运动机构	根据客户产品要求定制传送机构
使用环境	治具	根据客户产品要求设计提供
	冷却方式	风冷
	供电规格	AC220V/50Hz
	温度、湿度	0~40°C，30%SRHs85%，超出范围使用时需安装空调
其它	激光器	创鑫/锐科/杰普特
	整机尺寸(长x 宽x 高)	1264mm x600mmx1600mm

\*因技术改进，以上数据如有更改，以产品技术文件为准。  
Due to technical improvement, if any of the above data is changed, the product technical documents shall prevail.

## 应用领域/Application field

高度集成设计，匹配多种接口，可兼容多种激光器，可套配对接各类全自动化设备，满足大部分常见激光标记应用，诸如金属 / 非金属 / 塑料件字符、文字图案、LOGO 标记、二维码打标等，主要应用于对打标精度要求较高的领域。

Highly integrated design, matching a variety of interfaces, compatible with a variety of lasers, can be fitted with all kinds of fully automated equipment, meet most common laser marking applications, such as metal/non-metal/plastic parts character, text pattern, logo marking, QR code marking, etc., mainly used in the marking accuracy requirements of the field.

# FIVE ADVANTAGES, ENABLING INTELLIGENT MANUFACTURING

## 五大优势, 赋能智造

### 企业优势 | Enterprise advantage

- ▶ 国家级高新技术企业, 品质保证;
- ▶ 80 余人博士级研究团队, 专注技术创新与突破;
- ▶ 拥有独立研发基地与生产车间, 自研自产, 实力靠谱。
- ▶ National high-tech enterprises, guaranteed quality;
- ▶ More than 80 doctoral level research team, focusing on technological innovation and breakthrough;
- ▶ With independent R&D base and production workshop, self-research and production, strength is reliable.

### 技术优势 | Technical advantages

- ▶ 五轴联动, 360°无限旋转, 全空间无死角作业;
- ▶ 自研独创直驱技术, 反应迅速, 运行稳定, 速度波动小;
- ▶ 接入循环线系统, 形成完整的自动化智能生产系统。
- ▶ Five axis linkage, 360° infinite rotation, the whole space without dead Angle operation;
- ▶ Self-research original direct drive technology, rapid response, stable operation, low speed fluctuation;
- ▶ Access to the circular pipeline system, forming a complete automatic intelligent production system;

### 品质优势 | Quality advantages

- ▶ 独特排风系统, 有效保护激光头, 维护更方便;
- ▶ 大尺寸人机交互触摸屏, 可优化工艺参数设置界面;
- ▶ 特制的金属镜片使聚焦后的激光束更强更细;
- ▶ 大理石基材, 龙门结构, 大大提升设备利用率, 承受负载大。
- ▶ Unique exhaust system, effectively protect the laser head, more convenient maintenance;
- ▶ Big size man-machine interaction touch screen, can optimize the process parameter setting interface;
- ▶ Special metal lenses make the focused laser beam stronger and thinner;
- ▶ Marble base material, gantry structure, greatly improve the utilization rate of equipment, can be bear large load;



## 定制优势 | Customization advantages

根据实际需求，可选择超高清像素工业相机；  
及质量监测，且可根据实际需求选配相机；  
可兼容不同类型激光器，按需定制；  
支持定制服务，根据需求提供个性化配置，实现一机多用。

According to the actual demand, can choose ultra high definition pixel industrial camera;

Quality monitoring, and can be selected according to the actual needs of the camera;

Compatible with different types of lasers, customized according to demand;

Supports customized service and provides personalized configuration according to requirements, realizing multi-purpose of a machine;



## 售后优势 | After-sales advantages

为客户提供 24 小时值班制的售前，售中及售后服务体系；  
工程师点对点的培训、保养、及设备故障维修、工艺调试支持；  
建立完整的用户档案，定期专人回访，客户满意度调查。

To provide customers with 24 hours of on-duty pre-sales, sales and after-sales service system;

Engineer peer - to - peer training, maintenance, equipment fault repair, process debugging support;

Establish a complete user profile, regular specially-assigned return visit, customer satisfaction survey;



## 提供专业激光技术与装备自动化解决方案

Provide professional laser technology and equipment automation solutions.



# THE LASER TECHNOLOGY IS INCREASINGLY MATURE AND WIDELY USED

## 技术日益成熟, 应用领域广泛

### 应用领域/application area

激光机适用于精密电子元件、医疗领域、新能源领域、航空航天、汽车制造、工程机械、模具、半导体产品、健身器材等领域的碳钢、不锈钢、钛合金、铝合金等材料的三维精密柔性加工，也适用于医药生物等产品加工，随着技术的创新与成熟，未来适用的领域与场景将越来越广泛。



Laser machine is suitable for precision electronic components, medical field, new energy field, aerospace, automobile manufacturing, engineering machinery, mold, semiconductor products, fitness equipment and other fields of carbon steel, stainless steel, titanium alloy, aluminum alloy and other materials of three-dimensional precision flexible processing, but also suitable for medical biological products processing, with the maturity of technology and promotion, In the future, the applicable fields and scenarios will be more and more extensive.



- ▶ 精密电子元件：电子烟、DIP 封装元器件、喇叭和马达、如电容器、发动机、变压器等；
- ▶ 医疗领域：CT、核磁共振、DR 系统、CR、直线加速器等医疗设备；
- ▶ 新能源领域：新能源汽车、太阳能照明领域、风能发电系统等领域；
- ▶ 电子产品；如 VR 眼镜、照相机、摄像头、液晶 TV、音频设备、汽车导航系统等产品；
- ▶ 高端领域：航天、航空、国防、汽车和高端通信等行业；
- ▶ 半导体产品：LSI、IC、混合 IC、CSP、BGA 等。



- ▶ Precision electronic components: E-cigarettes, DIP package components, horns and motors, such as capacitors, engines, transformers, etc;
- ▶ Medical field: CT、MRI、DR system、CR、linear accelerator,ect;
- ▶ New energy fields: new energy vehicles, solar lighting, wind power generation system, etc;
- ▶ Electronic products: such as VR glasses, cameras, webcam, LCD TV, audio equipment, car navigation system, etc.
- ▶ High-end sectors: aerospace, aviation, defense, automotive and high-end communications,etc;
- ▶ Semiconductor product: LSI、IC、mix IC、CSP、BGA,etc.

# EMBRACE INTELLIGENT MANUFACTURING BUILD A BRIGHT FUTURE TOGETHER

## 拥抱智能制造·共筑美好未来

### 企业文化/Enterprise culture



以人为本，以才为重，持续创新，追求卓越，坚持闯、创、干精神，致力于大数据工业互联，实现整厂自动化，积极参与中国制造 2025，共同实现中国工业 4.0 这一伟大使命。

People-oriented, talent first, continuous innovation and the pursuit of excellence, adhere to the spirit of "breakthrough", "innovation" and "hard work", committed to big data industrial interconnection, to achieve the whole factory automation, actively participate in Made in China 2025, and jointly realize the great mission of China's Industry 4.0.

### 公司环境/Company environment



## 实力认证/Strength certification

### 专利认证 Patent certification

已取得发明专利  
计算机软件著作权  
实用新型专利  
外观专利  
同时申请实用新型专利

Company has obtained invention patents  
Computer software Copyrights  
Utility model patents and  
Appearance patents  
Utility model patents  
Invention patents  
Appearance patents.



### 软件著作权 Software copyright

已取得软件著作权  
Copyrights have been acquired



IECQ 符合性证书  
ISO 9001:2015 认证  
ISO 14001:2015 认证

IECQ Certificate of compliance  
ISO 9001:2015 Authentication  
ISO 14001:2015 Authentication



# BE PERSISTENT IN YOUR DEEDS, SEEK TRUTH FROM FACTS AND ENCOURAGE INNOVATION

笃行致远, 惟实励新

未来展望/Prospect of the future 

艾姆克斯将继续秉承“合作共赢”原则，以市场为导向，以客户需求为基础，坚持“自主研发、持续创新、技术领先”，紧跟国家战略，实现国产替代，面向全球，实现全厂智能制造，打造成为国际一流的智能智造系统提供商。

Amikes will continue to adhere to the principle of "win-win cooperation", market-oriented, based on customer demand, adhere to "independent R&D, continuous innovation, technology leadership", keep up with the national strategy, look at the domestic substitution, face the world, realize the whole factory intelligent manufacturing, and build into a world-class intelligent manufacturing system provider.



# 拥抱智能制造 · 共筑美好未来

Embrace intelligent manufacturing and build a better future together

深圳市艾姆克斯科技有限公司  
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