LASER MARKER SERIES

激光打标机

SHANGHAI SHINEWORLD GROUP

炫德国际集团

Shineworld

SHANGHAI SHINEWORLD GROUP

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Shineworld

CONTENTS
目录

Shineworld

机型分类原则 | Model classifying principle

针对材料对激光吸收的特性，可将激光打标机分为两大系列，一类采用固体激光器，一类采用CO2 激光器，客户可根据材料的特性，选择不同系列的激光打标机，常用的材料分类如下表。

According to the characteristics of materials on laser absorption, laser marking machines can be divided into two series, one uses solid-state lasers, and the other uses CO2 lasers. Customers can choose different series of laser marking machines according to the characteristics of materials. The materials are classified in the table below.

固体激光系列（YAG/YVO4） （以下为适用于固体激光的部分材料） Solid-state laser series (YAG/YVO4) (the following are some materials suitable for solid-state lasers)		CO₂ 系列 （以下为适用于 CO₂ 激光的部分材料） CO₂ series (the following are some materials suitable for CO₂ lasers)	
名称 Name	应用领域 Application field	名称 Name	应用领域 Application field
普通金属及合金 Common metals and alloys	铁、铜、铝、镁、锌等所有金属 All metals such as iron, copper, aluminum, magnesium, zinc	聚氯乙烯 PVC	管材，电线绝缘层，密封件 Tubing, wire insulation, seals
稀有金属及合金 Rare Metals and Alloys	金、银、钛、铂 Gold, Silver, Titanium, Platinum	ABS	电器用品外壳，日用品 Electrical appliance shell, daily necessities
金属氧化物 Metal oxide	各种金属氧化物均可 Various metal oxides	亚克力 PMMA	透明材料，仪器表壳 Transparent material, instrument case
特殊表面处理 Special surface treatment	磷化、铝阳极化、电镀表面 Phosphating, aluminum anodizing, electroplating surface	防弹胶 PC	高抗冲要求的透明制品 Transparent products with high impact resistance requirements
水晶 Crystal	水晶内雕 Crystal engraving	不饱和聚酯 AK	涂料，装饰品，板材，钮扣 Paints, Decorations, Sheets, Buttons
ABS	电器用品外壳，日用品 Electrical appliance shell, daily necessities	聚氨酯 PU	鞋底，人造皮革，油漆 Sole, faux leather, paint
油墨 ink	透光按键、印刷制品 Translucent keys, printed products	环氧树脂 EP	电子元件的封装，绝缘层 Encapsulation of electronic components, insulating layers
环氧树脂 EP	电子元件的封装，绝缘层 Encapsulation of electronic components, insulating layers	玻璃 Glass	玻璃表面 glass surface

某些材料可同时适用于两种激光。有些材料性质复杂，不宜于分类。基于以上原因，您可将产品邮寄给我们，我们将通过试验，为您选择最合适的机型。以上分类仅作参考。

Certain materials are suitable for both lasers. Some materials are complex in nature and not suitable for classification. For the above reasons, you can mail the product to us, and we will choose the most suitable model for you through testing. The above categories are for reference only.

激光打标与其他标记技术比较

标记工艺 Marking process	性能 Performance	图形文字变更 Graphic text changes	耗材 Consumables
激光振镜打标 Laser galvanometer marking	好 Excellent	随意变更 Change at will	不需要 No need
激光掩膜打标 Laser mask marking	较好 Good	不易变更 Not easy to change	需要 Need
化学腐蚀 chemical corrosion	好 Excellent	不易变更 Not easy to change	需要 Need
喷墨打印 inkjet printing	较差 Poor	易于变更 Easy to change	需要 Need
机械冲压 Mechanical stamping	较差 Poor	不易变更 Not easy to change	需要 Need

✦ 半导体端面泵浦固体激光打标机系列
DIODE END-PUMPED LASER MARKER

半导体端面泵浦打标机原理
The principle of semiconductor end face pump marking machine

半导体端面泵浦激光打标机是我公司采用国际上最先进的激光泵浦技术,直接从激光晶体的端面将半导体泵浦光(808nm)泵入,经光学镜组输出产生激光。使得激光器的光光转换效率大大提高,可以达到45%以上,同时泵浦源功耗也随之减少,使得冷水机功耗大幅度下降,整机功耗降低。端面泵浦比侧面泵浦具有更好的光束质量及较高的峰值功率。

The semiconductor end-pumped laser marking machine is our company using the most advanced laser pumping technology in the world. It directly pumps the semiconductor pumping light (808nm) from the end face of the laser crystal, and generates laser light through the output of the optical mirror group. The optical-to-optical conversion efficiency of the laser is greatly improved, which can reach more than 45%, and the power consumption of the pump source is also reduced, which greatly reduces the power consumption of the chiller and the power consumption of the whole machine. End-pumping has better beam quality and higher peak power than side-pumping.

优点及适用范围
Advantages and scope of application

✦ 输出激光光斑较小,打标线条较细,更适合一些较精细图文的标记。

✦ 光束质量好,输出激光稳定性高,打标效果较易调试。激光频率高,打标速度更快。

✦ 整机性能稳定,体积小,功耗低。

✦ The output laser spot is smaller and the marking line is thinner, which is more suitable for some finer graphic marks.

✦ The beam quality is good, the output laser has high stability, and the marking effect is easy to debug. The laser frequency is high, and the marking speed is faster.

✦ The whole machine has stable performance, small size and low power consumption.

设备类型
Equipment type

半导体端面泵浦激光打标机系列
Semiconductor end-pumped laser marking machine series

半导体侧面泵浦激光打标机系列
Semiconductor side-pumped laser marking machine series

YAG泵浦激光打标机系列
YAG pump laser marking machine series

0 1 2 3 4 5 6 7 8 9 10 11 12
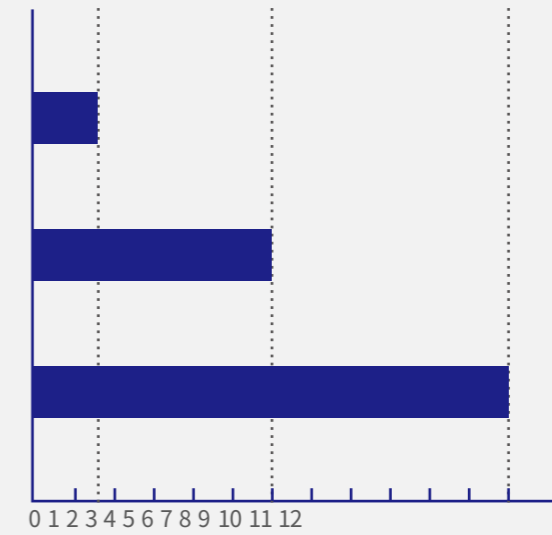
光束质量
Beam quality M^2

注:M2越小,打标效果越精细
Note: The smaller M2 is, the finer the marking effect will be

✦ 红外激光技术参数 | Product Description

红外通用打标机型-端面泵浦激光打标机
Infrared universal marking model - end-pumped laser marking machine

整机模块化设计,耗电省,体积小;激光输出稳定,可调频率范围广,光电转换效率高;适合各种按键镭射加工,塑胶外壳标记,首饰,五金,电子元气件,电话卡和智能卡片加工等众多领域。此工作台可适用于EP-10A,EP-15A,EP-25,EP- 30等机型。

Modular design of the whole machine, low power consumption, small size; stable laser output, wide adjustable frequency range, high photoelectric conversion efficiency; suitable for laser processing of various buttons, plastic shell marking, jewelry, hardware, electronic components, telephone cards and smart Card processing and many other fields. This workbench can be applied to EP-10A, EP-15A, EP-25, EP-30 and other models.

EP-12S端面泵浦激光打标机
EP-12S End Pump Laser Marking Machine

公司传统机型常用机柜,工作台面大,人性化设计,便于客户摆放生产物料。此工作台可适用于EP- 12,EC-12等机型。

The company's traditional models are commonly used in cabinets, with large work surfaces and humanized design, which is convenient for customers to place production materials. This workbench can be applied to EP-12, EC-12 and other models.

分体打标机型--适用配置流水线端面泵浦激光打标机
Split marking model--suitable for pipeline end-pumped laser marking machine

分体设计,激光器可脱离控制台面随意移动;高度集成的控制系统和冷却系统,整机简洁,紧凑,具有完善的报警信号处理功能,能配合流水线长期,稳定的生产,适用于制卡,包装等流水线作业的场合。该工作台适用于有流水线生产需求的各种激光器,如EP-15-THG-F,EP-25-ID等机型。

Split design, the laser can be moved away from the console surface at will; highly integrated control system and cooling system, the whole machine is simple and compact, with perfect alarm signal processing function, can cooperate with the assembly line for long-term, stable production, suitable for card making, packaging Such as the occasion of assembly line operations. This workbench is suitable for various lasers with assembly line production requirements, such as EP-15-THG-F, EP-25-ID and other models.

技术参数 | Specifications

机器型号 Machine Type		红外打标机 Infrared marking machine				
		EP-10A/15A	EP-25	EP-30	EP-25-ID	EP-12/EC-12
标记参数 Marking parameter	标记范围/工作距离 Marking Range/Working Distance	标 配 Standard 160mm×160mm/296mm (±5mm)			标配 Standard 100mm×100mm/192mm (±5mm)	
		选配 Optional 100mm×100mm/192mm (±5mm)			选配 Optional 160mm×160mm/296mm (±5mm)	
	标记最小字符(字高 1mm) Mark the smallest character (character height 1mm)	0.2mm			0.2mm	
	标记最小线宽 Mark the minimum line width	35μm~50μm			25μm~35μm	
	标记速度(罗马字体, 字高 1mm) Marking Speed (Roman font, character height 1mm)	400 字符/秒 400 characters/sec			400 字符/秒 400 characters/sec	
激光特性 Laser characteristics	激光波长 Laser wavelength	1064nm				
	输出功率 Output Power	10W/15W	25W	30W	25w	12W
	光束质量 M²Beam quality M²	≤1.3				
	脉冲重复频率 pulse repetition frequency	10~200kHz				
其它 Others	冷却方式 Cooling method	风冷 air cooling	水冷 water cooling			
	运行环境温度 Operating ambient temperature	15℃-35℃				
	电力要求 Power requirements	单相 Single-phase AC 220V,<5A	单相 Single-phase AC 220V,10A			
	整机功耗 Machine power consumption	0.5kW	1kW			
外形尺寸 (宽×长×高) Dimensions (W×L×H)	主机系统 Host system	700×950×1428mm		600×802×1330mm		1000×1200×1400mm
	冷却系统 cooling system	无	535×325×620mm		485×580×270mm	620×360×690mm

注:1. 最小字符和最小线宽会因材料不同、标记深度不同而有所区别; 2. 由于产品不断更新,一切配置以我公司最新产品价目手册为准。

Note: 1. The minimum character and minimum line width will be different due to different materials and different marking depths;
2. Due to the continuous updating of products, all configurations are subject to the latest product price book of our company.

微型多功能PMS Draco 激光功率计
Miniature Multifunctional PMS Draco Laser Power Meter

✦ 内置大容量锂离子可充电电池,体积小,便携性好

✦ 数字,曲线,表盘等多种显示,便于观察具有USB通信接口

✦ 能记录10000个测试点,时间间距可调,可读取到PC

✦ 特别的烤机(连续测量)输出功率下降报警信号,非常实用

✦ 0 - 1V模拟量输出

✦ 表头兼容多种探头(50 W, 200 W),数据存储在探头里

✦ 探头为量热型,光谱响应范围为0．25μ m~11μm,PC机直接校准,可以测量连续及脉冲激光

✦ Built-in high-capacity lithium-ion rechargeable battery, small size, good portability

✦ Various displays such as numbers, curves, dials, etc. are easy to observe with USB communication interface

✦ Can record 10,000 test points, adjustable time interval, can be read to PC

✦ Special roaster (continuous measurement) output power drop alarm signal, very practical

✦ 0 - 1V analog output

✦ The meter head is compatible with a variety of probes (50 W, 200 W), and the data is stored in the probe

✦ The probe is calorimetric type, the spectral response range is 0.25μ m~11μm, the PC is directly calibrated, and it can measure continuous and pulsed lasers

EP-25-Twin/EP-30-Twin端面泵浦激光打标机
EP-25-Twin/EP-30-Twin end pump laser marking machine

双头机是一种大幅提高加工效率的一种专用机型,两头可同时加工相同的产品,具有效率高,性能稳定等一系列优势,适用于按键,IC等单件产品加工时间短,产量大等特点的行业。此工作台适用的机型 有EP-25-Twin,EP-30-Twin等。

The double-head machine is a special model that greatly improves the processing efficiency. Both ends can process the same product at the same time. It has a series of advantages such as high efficiency and stable performance. It is suitable for single-piece products such as buttons and ICs. Large and other characteristics of the industry. The applicable models of this worktable are EP-25-Twin, EP-30-Twin, etc.

技术参数 Specifications

机器型号 Machine Type		EP-25-TWIN		EP-30-TWIN	
		标配 Standard	选配 Optional	标配 Standard	选配 Optional
标记参数 Marking parameter	标记范围 Marking Range	160mm×160mm	100mm×100mm	160mm×160mm	100mm×100mm
	工作距离 Working distance	296mm (±5mm)	192mm (±5mm)	296mm (±5mm)	192mm (±5mm)
	标记最小字符 Mark the smallest character	0.2mm	0.1mm	0.2mm	0.1mm
	标记最小线宽 Mark the minimum line width	50μm-70μm	30μm-50μm	50μm-70μm	30μm-50μm
	标记速度(罗马字体, 字高1mm) Marking speed (Roman font, character height 1mm)	300 字符/秒 300 characters/sec	250 字符/秒 250 characters/sec	300 字符/秒 300 characters/sec	250 字符/秒 250 characters/sec
激光特性 Laser characteristics	激光波长 Laser wavelength	1064nm		1064nm	
	输出功率 Output Power	25W		30W	
	功率稳定性(8h) Power stability (8h)	±2%		±2%	
	光束质量 M² Beam quality M²	≤1.3		≤1.3	
	脉冲重复频率 Pulse repetition frequency	10~200kHz		10~200kHz	
	激光安全等级 Laser Safety Level	Class IV		Class IV	
其它 Others	系统防护等级 System protection level	IP54		IP54	
	冷却方式 Cooling method	水冷 Water cooling		水冷 Water cooling	
	运行环境温度 Operating ambient temperature	15℃-35℃		15℃-35℃	
	电力要求 Power requirements	单相 Single-phase AC 220V,16A		单相 Single-phase AC 220V,16A	
	整机功耗 Machine power consumption	≤1.5kW		≤1.5kW	
外形尺寸 (宽×长×高) Dimensions (W×L×H)	主机系统 Host system	700mm×950mm×1428mm		700mm×950mm×1428mm	
	冷却系统 Cooling system	535mm×325mm×620mm		535mm×325mm×620mm	
重 量 Weight	主机系统 Host system	300kg		300kg	
	冷却系统 Cooling system	52kg		52kg	

注:1. 最小字符和最小线宽会因材料不同、标记深度不同而有所区别; 2. 由于产品不断更新,一切配置以我公司最新产品价目手册为准。

Note: 1. The minimum character and minimum line width will be different due to different materials and different marking depths;
　　　2. Due to the continuous updating of products, all configurations are subject to the latest product price book of our company.

✦ 紫外激光和绿激光技术参数　Specifications

双工位紫外/绿光打标机型端面泵浦激光打标机
Double-station UV/Green Marking Type End-pumped Laser Marking Machine

双工位旋转打标工作台，两个工位一边上料，一边打标，能有效的提高工作效率。高精度的旋转工作台，能实现手动/自动旋转，配合人性化的光幕设计，可以实现高效，安全的生产。该工作台可与红外，绿光，紫外等多种激光器配合使用，主要适用于紫外 EP-15-THG-D，EP-25-THG-D，EP-30-THG-D和绿光EP-25-SHG-D等机型。

Double-station rotary marking table, two stations are feeding materials and marking at the same time, which can effectively improve work efficiency. The high-precision rotary table can realize manual/automatic rotation, and with the humanized light curtain design, efficient and safe production can be achieved. The table can be used with infrared, green, ultraviolet and other lasers, mainly suitable for ultraviolet EP-15-THG-D, EP-25-THG-D, EP-30-THG-D and green EP-25-SHG-D and other models.

单工位紫外/绿光打标机型端面泵浦激光打标机
Single-station UV/Green Marking Type End-pumped Laser Marking Machine

单工位打标平台，具有完善的激光防护系统，能有效避免激光对人体的损伤；手动上拉门，使用方便，安全；整机设计简洁，美观，符合人机工程学原理。紫外激光适用于精细加工和特殊材料的特种加工。该机柜适用于EP-15-THG-S，EP-25-THG-S，E P - 3 0 - T H G - S，E P - 1 5 A - SHG，EP-15-SHG，EP-25- SHG，EP-30-SHG等机型。

The single-station marking platform has a complete laser protection system, which can effectively avoid laser damage to the human body; the manual sliding door is convenient and safe to use; the design of the whole machine is simple, beautiful, and ergonomic. Ultraviolet lasers are suitable for fine processing and special processing of special materials. This cabinet is suitable for EP-15-THG-S, EP-25-THG-S, EP-30-THG-S, EP-15A-SHG, EP-15-SHG, EP-25-SHG, EP -30-SHG and other models.

技术参数　Specifications

机器型号 Machine Type		紫外打标机 UV marking machine			绿光打标机 Green light marking machine	
		UV-3C	EP-15/25/30-THG-S	EP-15/25/30-THG-D	EP-20A-SHG	EP-20/25/30-SHG
标记参数 Marking parameter	标记范围/工作距离 Marking Range/Working Distance	标配 Standard 100mm×100mm/192mm (±5mm)				
		选配 Optional 160mm×160mm/295mm (±5mm)				
	标记最小字高 Mark minimum character height	0.06mm	0.1mm	0.1mm	0.08mm	0.1mm
	标记最小线宽 Mark the minimum line width	10μm~15μm			25μm~35μm	
	标记速度(罗马字体，字高 1mm) Marking speed (Roman font, character height 1mm)	400 字符/秒 400 characters/sec				
激光特性 Laser characteristics	激光波长 Laser wavelength	355nm			532nm	
	激光功率 Laser power	3W	4W/7W/10W	4W/7W/10W	10W	10W/15W/20W
	光束质量 M² Beam quality M²	≤1.3				
	脉冲重复频率 Pulse repetition frequency	10~200kHz	10~200kHz		10~200kHz	10~200kHz
其它 Others	冷却方式 Cooling method	水冷			风冷	水冷
	运行环境温度 Operating ambient temperature	15℃-35℃			15℃-30℃	15℃-35℃
	电力要求 Power requirements	单相 Single-phase AC 220V，10A	单相 Single-phase AC 220V，16A		单相 Single-phase AC 220V，10A	单相 Single-phase AC 220V，10A
	整机功耗 Machine power consumption	≤1kW	≤1.5kW		≤0.6kW	≤1kW
外形尺寸 (宽×长×高) Dimensions (W×L×H)	主机系统 Host system	845×950×1630mm	800×1025×1500mm		845×950×1630mm	
	冷却系统 Cooling system	485×580×270mm	535×325×620mm		无 none	485×580×270mm

注：1. 最小字符和最小线宽会因材料不同，标记深度不同而有所区别；2. 由于产品不断更新，一切配置以我公司最新产品价目手册为准。

Note: 1. The minimum character and minimum line width will be different due to different materials and different marking depths;
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✦ 光纤激光打标机系列
FIBER LASER MARKER

光纤激光打标机是我公司运用现今世界上先进的激光技术研制而成的新一代打标系统。采用光纤输出激光，再经高速扫描振镜系统实现打标功能。光纤激光打标机光电转换效率高，采用风冷方式冷却，整机小巧，输出光束质量好，可靠性高。可雕刻金属材料和部分非金属材料，主要应用于对深度、光滑度、精细度要求较高的领域，如钟表、首饰、模具行业、位图打标等。

Fiber laser marking machine is a new generation of marking system developed by our company using the world's advanced laser technology. The fiber output laser is used, and then the marking function is realized by a high-speed scanning galvanometer system. The fiber laser marking machine has high photoelectric conversion efficiency, adopts air-cooled cooling, the whole machine is compact, the output beam quality is good, and the reliability is high. It can engrave metal materials and some non-metal materials, mainly used in fields with high requirements on depth, smoothness and fineness, such as watches, jewelry, mold industry, bitmap marking, etc.

光纤、端泵、侧泵、灯泵打标机对比
Comparison of optical fiber, end pump, side pump and lamp pump marking machine

	光纤(20W) Optical fiber	端泵(25W) End pump	侧泵(50W) Side pump	灯泵(50W) Lamp pump
重复频率 Repeat frequency	1～1000KHz	10～200KHz	<10KHz	<7KHz
光学质量 Optical quality	最好 Excellent	较好 Good	差 Poor	很差 Poorer
最小线宽 Minimum line width	0.01mm	0.03mm	0.06mm	0.08mm
光电效率 Photoelectric efficiency	30%	20%	6%	3%
整机电功率 Whole electrical power	500W	1500W	2500W	5000W
冷却方式 Cooling method	风冷、水冷 Air-cooling, water-cooling	风冷、水冷 Air-cooling, water-cooling	水冷 Water-cooling	水冷 Water-cooling
激光器寿命 Laser life	最长 Longer	比较长 Long	短 short	最短 shorter

注：最小线宽因材料的不同及打标参数的差异而有所区别。
Note: The minimum line width varies with different materials and marking parameters.

HM20光纤激光打标机 HM20 Fiber Laser Marking Machine

应用特点 Features

◆ 采用先进的MOPA激光器
◆ 最新研发的CXY光电振镜特别适用于各种消费电子的标记
◆ 例如：阳极铝打黑、键盘打标、充电器打标
◆ 最大单点能量1mj,可用于铝、铜、不锈钢等材料的深雕工艺
◆ 性价比极高
◆ Using advanced MOPA laser
◆ Newly developed CXY photoelectric galvanometer is especially suitable for the marking of various consumer electronics
◆ For example: black anode aluminum, keyboard marking, charger marking
◆ The maximum single point energy is 1mj, which can be used for deep carving process of aluminum, copper, stainless steel and other materials
◆ High cost performance

样品展示 Sample Pictures

技术参数 Technical Parameters

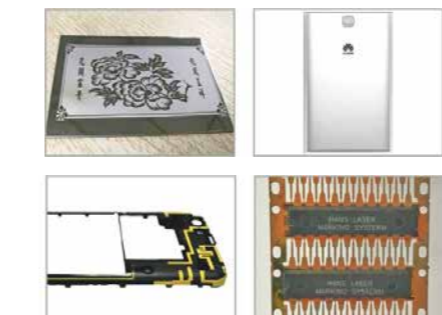|	
输出功率 Output Power	20W
光束质量 Beam Quality	≤1.3M²
脉冲宽度 Pulse Width	4~200ns
脉冲重复频率 Pulse Repetition Frequency	1~1000KHz

YLP-S20光纤激光打标机 YLP-S20 Fiber Laser Marking Machine

应用特点 Features

◆ 采用SPI激光器，脉宽可调范围广
◆ 可适用于更多非金属材料
◆ 光束质量好，峰值功率高，可加工高分子材料
◆ Using SPI laser, wide adjustable range of pulse width
◆ Applicable to more non-metallic materials
◆ Good beam quality, high peak power, can process polymer materials

样品展示 Sample Pictures

技术参数 Technical Parameters

输出功率 Output Power	20W
光束质量 Beam Quality	≤1.3M2
脉冲宽度 Pulse Width	3~500ns
脉冲重复频率 Pulse Repetition Frequency	1~1000KHz
可选波形 Optional Waveform	40
重量 Weight	185KG

YLP-MP20光纤激光打标机 YLP-MP20 Fiber Laser Marking Machine

样品展示 Sample Pictures

应用特点 Features

✦ 采用IPG MOPA激光器
✦ 德国ScanLab振镜
✦ 可用于阳极铝打黑和非金属材料加工
✦ Using IPG MOPA laser
✦ German ScanLab galvanometer
✦ It can be used for blackening of anodized aluminum and processing of non-metallic materials

技术参数 Technical Parameters

输出功率 Output Power	20W
光束质量 Beam Quality	≤1.5M2
脉冲宽度 Pulse Width	4~200ns
脉冲重复频率 Pulse Repetition Frequency	1.6~1000KHz
可选波形 Optional Waveform	8
标记范围	100mm*100mm
重量	245KG

YLP-S70光纤激光打标标准机型 YLP-S70 Fiber Laser Marking Machine Standard Model

样品展示 Sample Pictures

应用特点 Features

✦ 采用先进的mopa光纤技术
✦ 可灵活应用于各种材料打标,特别适合用于深雕和电池极片激光清洗
✦ Using advanced mopa fiber technology
✦ It can be flexibly used in marking of various materials, especially suitable for deep engraving and laser cleaning of battery pole pieces

扩展功能 翻译

可在工件表面进行清洗,再焊接降低材料表面脏污对焊接效果的影响,焊接完后对焊点进行激光清洗,使得焊点更美观。

It can be cleaned on the surface of the workpiece, and then welded to reduce the influence of material surface contamination on the welding effect. After welding, laser cleaning is performed on the solder joints to make the solder joints more beautiful.

技术参数 Technical Parameters

激光类型 Laser Type	光纤激光器 Fiber-optic Laser	光束质量 Beam Quality	≤ 1.6M2
激光波长 Laser Wavelength	1064nm	峰值功率 Peak Power	13kw
脉冲宽度 Pulse Width	10~500ns 可选 Optional	单点能量 Single Point Energy	1mj
电源规格 Power Specifications	AC220V/2.5A	可选波形 Optional Waveform	37
运行温度 Operating Temperature	15 ℃ ~35 ℃	最小线宽 Minimum Line Width	0.02mm
激光重复频率 Laser Repetition Rate	1~1000KHz	冷却方式 Cooling Method	风冷 Air Cooling
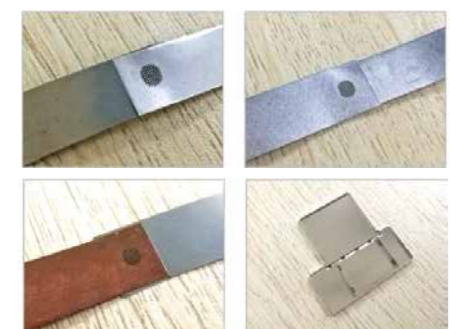
YLP-F200 光纤激光打标机 YLP-F200 Fiber Laser Marking Machine

样品展示 Sample Pictures

### 应用特点 Features

✦ 目前功率较大的打标机,特别适用于对功率要求高的场合,例如:电池极片清洗,金属
✦ 材料深雕,材料切割等
✦ The current high-power marking machine is especially suitable for occasions with high power requirements, such as: battery pole piece cleaning,
✦ sions with high power requirements, such as: battery pole piece cleaning,
✦ metal material deep engraving, material cutting, etc.

技术参数 Technical Parameters

输出功率 Output Power	200W
光束质量 Beam Quality	≤1.8M2
脉冲宽度 Pulse Width	100ns
脉冲重复频率 Pulse Repetition Frequency	20~500KHz
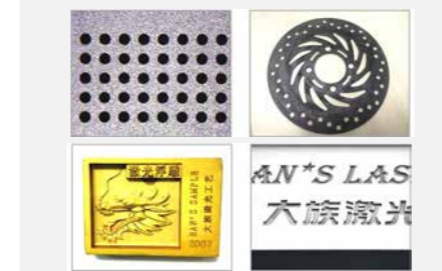
YLP-MDF系列光纤激光打标机
YLP-MDF Series Fiber Laser Marking Machine

✦ 可在三维曲面打标;亦可在平面打标;
✦ 可按需配置不同型号的激光器。
✦ It can mark on 3D curved surfaces; it can also be on a plane;
✦ Different types of lasers can be configured on demand.

MARS海外CE认证系列光纤激光打标机
MARS Overseas CE Certification Series Fiber Laser Marking Machine

✦ 体积小,方便灵活,可脱机打标,易于集成到生产流水线上。
✦ Small size, convenient and flexible, can be marked off-line, easy to integrate into the production line.

YLP-FBX系列光纤激光打标机
YLP-FBX Series Fiber Laser Marking Machine

✦ 重量轻,体积小,便携设计,
✦ 适用于在较大型或者较重的工件上打标
✦ Light weight, small size, portable design,
✦ Suitable for marking larger or heavier workpieces.

机器型号 Machine Type		YLP-MDF-152-20/30/50	MARS-10/20/30/50	YLP-FBX
外形尺寸 Dimensions [mm×mm×mm]	整体外形 Overall Shape	840×800×1400	主控箱 main control box：545×186×430 主梁 main beam：589×124×158	主控箱 main control box：380×174×475 主梁 main control box：227×319.5×421
标记参数 Marking Parameter	聚焦镜头 Focus Lens	F-254 不可选 not optional	F-160 可选 optional	F-160 可选 optional
	标记范围 Marking Range [mm×mm]	160×160	100×100	100×100
	工作距离 Working Distance [mm]	290（±2，零平面 zero plane）	197（±2，零平面 zero plane）	197（±2，零平面 zero plane）
	标记速度 Marking Speed [characters/sec]	300，罗马字体 Roman font，字高 character height 1mm	300，罗马字体 Roman font，字高 character height 1mm	300，罗马字体 Roman font，字高 character height 1mm
	标记最小字符 Marking Smallest Character [mm]	0.5	0.5	0.5
	标记最小线宽 Marking Minimum Line Width [μm]	30	30	30
	最大标记范围 Max. Marking Range [mm×mm]	40x40~400x400		
标记激光 Marking Laser	激光类型/波长 Laser Type/Wavelength [nm]	光纤 optical fiber/1064	光纤 optical fiber/1064	光纤 optical fiber/1064
	可调波形数量 Number of Adjustable Waveforms	8	8	固定 fixed
	输出功率(W) Output Power	20/30/50	20/30/50	20
	功率稳定性(峰值功率) Power Stability (Peak Power)	<5%rms	<5%rms	<5%rms
	功率稳定性(平均功率) Power Stability (Average Power)	<1%rms	<1%rms	<1%rms
	光束质量 M² Beam Quality	<1.3	<1.3	<1.5
	脉冲重复频率 Pulse Repetition Frequency	1.6KHz≤F≤1000KHz	1.6KHz≤F≤1000KHz	20KHz≤F≤1000KHz
指示激光 Indicating Laser	激光类型/波长 Laser Type/Wavelength	LD 红光 red light, 波长 wavelength 650nm	LD 红光 red light, 波长 wavelength 650nm	LD 红光 red light, 波长 wavelength 650nm
	输出功率(W) Output Power	<5mW	<5mW	<5mW
标记应用 Application	金属 Metal	★★★★	★★★☆	★★★☆
	塑料 Plastic	★★★★	★★★★	★★☆☆
	3D 标记 3D Marking	★★★★	★★★★	★☆☆☆
	阳极铝打表面黑 Anodized Aluminum With Black Finish	★★★☆	★★★☆	☆☆☆☆
	位图 Bitmap	★★★☆	★★★☆	★☆☆☆
其它 Others	冷却方式 Cooling Method	风冷		
	运行环境温度 Operating Ambient Temperature	15℃-35℃		
	电力要求 Power Requirements	220V/单相 single-phase/50Hz/2.5A		
	重量 Weight	260KG		40KG
	整机功耗 Machine Power Consumption	0.5KW		

注:1. 最小字符和最小线宽会因材料不同、标记深度不同而有所区别；2. YLP-MDF系列的重复频率会因激光器的不同而有所区别；3. 由于产品不断更新，一切配置以我公司最新产品价目手册为准；4. 根据★数量，证明其优越性。

Note: 1. The minimum character and minimum line width will be different due to different materials and marking depth; 2. The repetition frequency of YLP-MDF series will be different due to different lasers; 3. Due to the continuous updating of products, all The configuration is subject to the latest product price book of our company; 4. According to the quantity of ★, prove its superiority.

✦核心零部件 Core Components

激光器 Laser

- ✦ 最先进的MOPA结构光纤激光器
- ✦ 平均功率:20W 30W 50W
- ✦ 脉宽范围:4ns至200ns可调
- ✦ 高单脉冲能量:最大1.0mj
- ✦ 优异的光束质量:小于1.3M²
- ✦ 首脉冲稳定无漏光

- ✦ The most advanced MOPA structure fiber laser
- ✦ Average power: 20W 30W 50W
- ✦ Pulse width range: 4ns to 200ns adjustable
- ✦ High single pulse energy: 1.0mj max
- ✦ Excellent beam quality: less than 1.3M²
- ✦ The first pulse is stable without light leakage

聚焦镜头 Focus Lens

- ✦ 聚焦平面均匀性很好
- ✦ BOX畸变很小
- ✦ F160 F254 等各种范围的镜头
- ✦ 优质的镀膜
- ✦ 高损伤阈值

- ✦ Focus plane uniformity is very good
- ✦ BOX distortion is small
- ✦ F160 F254 and other range of lenses
- ✦ High quality coating
- ✦ High damage threshold
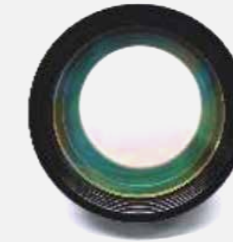
控制软件 Control Software

- ✦ HI打标软件,二十年行业沉淀
- ✦ 功能全面、使用方便、针对性强
- ✦ 编辑功能强大，焊接、自动捕捉
- ✦ 支持EAN、UPC、QR、MicroQR 和 Data Matrix等二维码
- ✦ 可根据客户需求定制

- ✦ HI marking software, 20 years of industry precipitation
- ✦ Comprehensive functions, easy to use and strong pertinence
- ✦ Powerful editing functions, welding, automatic capture
- ✦ Support QR codes such as EAN, UPC, QR, MicroQR and Data Matrix
- ✦ Can be customized according to customer needs

方头 Square Head

- ✦ 模块化设计，易于安装维护
- ✦ 一体加工成型，一致性好，精度高
- ✦ 从10mm-20mm应有尽有
- ✦ 自主知识产权。

- ✦ Modular design, easy to install and maintain
- ✦ Integrated processing and molding, good consistency and high precision
- ✦ From 10mm-20mm
- ✦ Independent intellectual property rights.

EMCC控制卡 EMCC Control Card

- ✦ 自主研发的高性能，多功能，高可靠性的EMCC控制系统
- ✦ 迄今已有超过30000套设备正在使用

- ✦ Self-developed high-performance, multi-functional, high-reliability EMCC control system
- ✦ More than 30,000 sets of equipment are in use so far

振镜 Galvo

- ✦ CXY-光电振镜,大族自主研发生产
- ✦ 进口的传感器,极快的响应速度
- ✦ 低噪声、高精度
- ✦ 光电传感技术
- ✦ 温度稳定性极佳

- ✦ CXY-photoelectric galvanometer, independently developed and produced by Han's
- ✦ Imported sensors, extremely fast response speed
- ✦ Low noise and high precision
- ✦ Photoelectric sensor technology
- ✦ Excellent temperature stability

✦ 样品展示 Sample Picture

✦ CO₂激光打标机
CO₂ LASER MARKING MACHINE

CO₂ 激光打标机原理
Principle of CO₂ Laser Marking Machine

CO₂激光器是一种气体激光器,其产生的波长为10.6μm,属于中红外频段,CO₂激光器有比较大的功率和比较高的电光转换效率,是目前功率最大的一种激光器。二氧化碳激光器以CO₂ 气体作为工作物质。将CO₂和其他辅助气体充入放电管,当在电极上加高电压,放电管中产生辉光放电,就可使气体分子释放出激光。将释放的激光能量放大后,就可进行激光加工

The CO₂ laser is a gas laser with a wavelength of 10.6μm, which belongs to the mid-infrared frequency band. The CO₂ laser has relatively large power and relatively high electro-optical conversion efficiency, and is currently the most powerful laser. Carbon dioxide lasers use CO₂ gas as the working substance. The CO₂ and other auxiliary gases are charged into the discharge tube. When a high voltage is applied to the electrodes, a glow discharge is generated in the discharge tube, and the gas molecules can emit laser light. After amplifying the released laser energy, laser processing can be performed

行业应用
Application

可雕刻非金属和部分金属材料。广泛应用于食品包装、饮料包装、医药包装、建筑陶瓷、服装辅料、皮革、钮扣、织物切割、工艺礼品、橡胶制品、石材、电子元件、手机外壳、笔记本及平板外壳、剥线、薄膜切割、背光板打点、PCB条码、外壳铭牌等。

Non-metallic and partially metallic materials can be engraved. Widely used in food packaging, beverage packaging, pharmaceutical packaging, architectural ceramics, clothing accessories, leather, buttons, fabric cutting, craft gifts, rubber products, stone, electronic components, mobile phone casings, notebook and tablet casings, wire stripping, film cutting , Backlight board, PCB barcode, shell nameplate, etc.

CO_2 系列激光打标机特点
# CO_2 Series Laser Marking Machine Features

- ✦ 激光功率大
- ✦ 功率由软件控制，连续可调
- ✦ 加工成本低廉，无需任何耗材
- ✦ 打标范围大
- ✦ 标记清晰，不易磨损，切割效率高
- ✦ 雕刻深浅随意控制
- ✦ 能适应多种产品

- ✦ Large laser power
- ✦ Power is controlled by software, continuously adjustable
- ✦ Low processing cost, no need for any consumables
- ✦ Large marking range
- ✦ The marking is clear, not easy to wear, and the cutting efficiency is high
- ✦ Engraving depth can be freely controlled
- ✦ Can adapt to a variety of products

打标范围
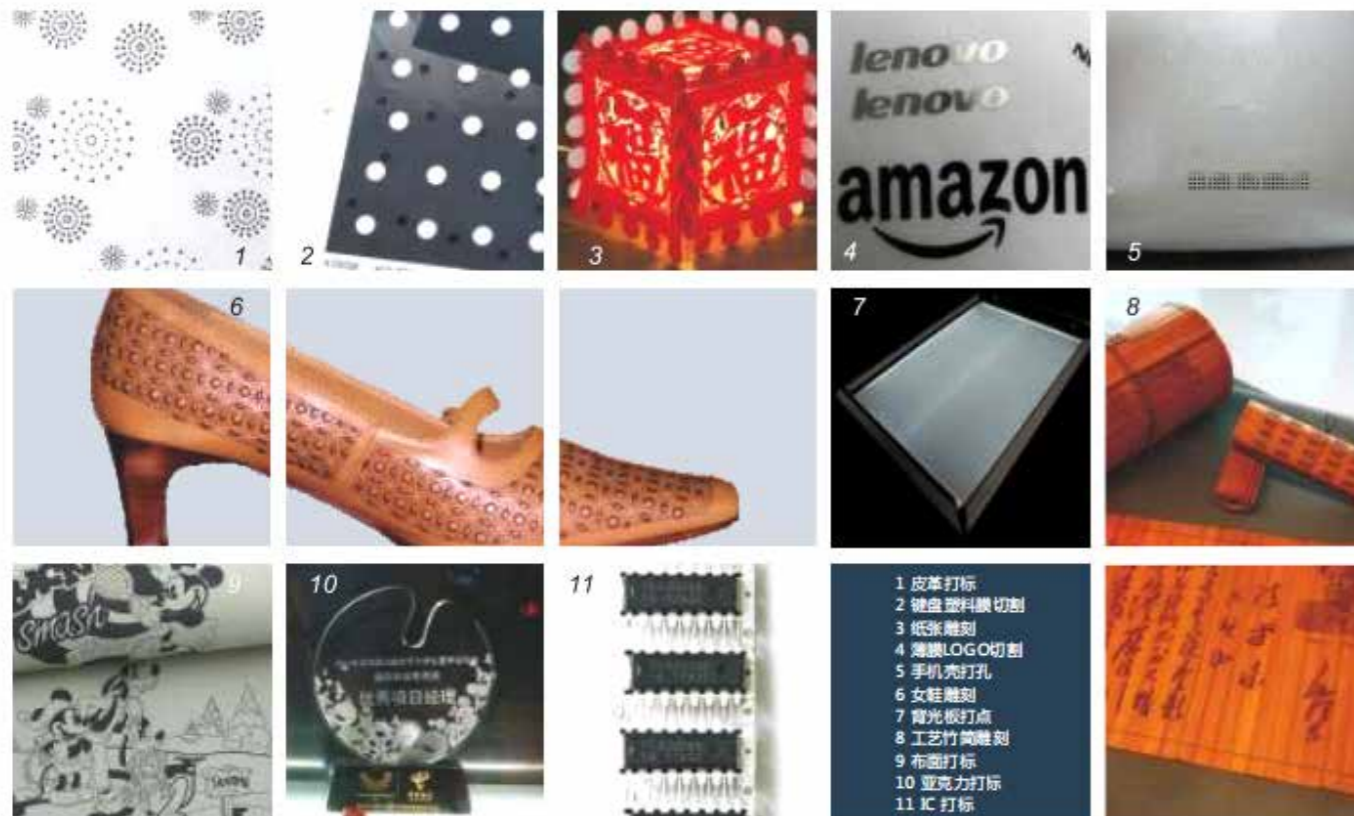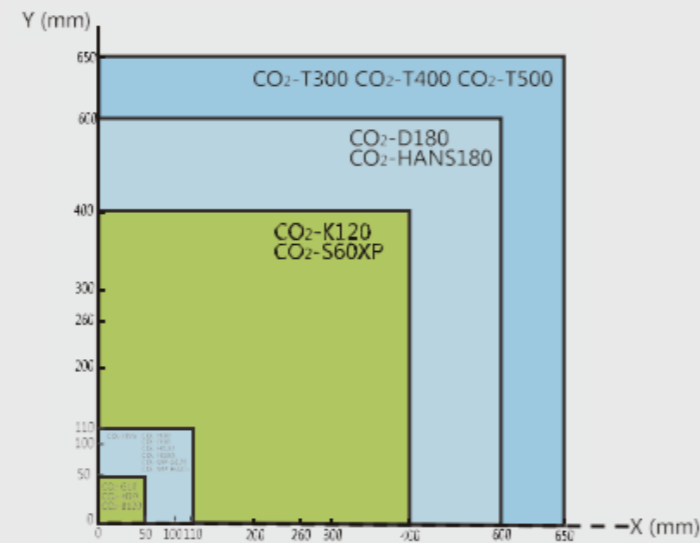
CO₂-T500/T400/T300激光打标机 CO₂-T500/T400/T300Laser Marking Machine
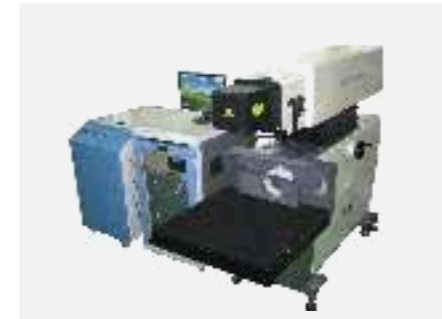
大功率激光标刻机，前聚焦，一体式设备，大幅面工作平台，水冷机型，可选配3D打标软件。可广泛用于工艺礼品、有机玻璃、服装皮革、木头纸张、食品包装、柔性线路板、陶瓷基片、半导体、晶体玻璃、塑料连接器、硅橡

High-power laser marking machine, front focus, integrated equipment, large-format working platform, water-cooled model, optional 3D marking software. Can be widely used in craft gifts, plexiglass, clothing leather, wood paper, food packaging, flexible circuit boards, ceramic substrates, semiconductors, crystal glass, plastic connectors, silicone rubber

CO₂-D200/HANS200激光打标机 CO₂-D200/HANS200Laser Marking Machine

大功率激光标刻机，前聚焦，分体式设备，大幅面工作平台，可自定义工作台，水冷机型，可选配3D打标软件。可广泛用于工艺礼品、有机玻璃、服装皮革、木头纸张、食品包装、石材、陶瓷基片、半导体、晶体玻璃、塑料连器、硅橡胶按键以及其他各种材料上的图文标记及切割。

High-power laser marking machine, front focus, split equipment, large-format work platform, customizable workbench, water-cooled model, optional 3D marking software. It can be widely used for graphic marking and cutting on craft gifts, plexiglass, clothing leather, wood paper, food packaging, stone, ceramic substrates, semiconductors, crystal glass, plastic connectors, silicone rubber buttons and other various materials.

CO₂-MP-G120/CO2-H180i激光打标机 CO₂-MP-G120/CO2-H180iLaser Marking Machine

特制大功率进口激光器，后聚焦，一体式设备，可升降工作台，水冷机型。对高分子塑料有更好的切割效果。可广泛用于工艺礼品、有机玻璃、服装皮革、木头纸张、食品包装、电子元器件、手机壳、柔性线路板、陶瓷基片、笔记本平板电脑壳、薄膜、塑料连接器、硅橡胶按键、SMD元件以及其他各种材料上的图文标记及切割。

Special high-power imported laser, rear focus, integrated equipment, liftable table, water-cooled model. It has better cutting effect on polymer plastics, and can be widely used in craft gifts, plexiglass, clothing leather, wood paper, food packaging, electronic components, mobile phone shells, flexible circuit boards, ceramic substrates, notebook and tablet computer shells, Graphical marking and cutting of films, plastic connectors, silicone rubber buttons, SMD components and various other materials.

CO₂-MP-H320i激光打标机 CO₂-MP-H320iLaser Marking Machine

特制特大功率进口激光器，后聚焦，一体式设备，可升降主梁，水冷机型。对高分子塑料材料有更好的切割效果，可广泛用于工艺礼品、有机玻璃、食品包装、电子元器件、手机壳、柔性线路板、陶瓷基片、笔记本平板电脑壳、薄膜、塑料连接器、硅橡胶按键、SMD元件以及其他各种材料上的图文标记及切割。

Special super high power imported laser, rear focus, integrated equipment, can lift the main beam, water-cooled model. It has better cutting effect on polymer plastic materials, and can be widely used in craft gifts, plexiglass, food packaging, electronic components, mobile phone shells, flexible circuit boards, ceramic substrates, notebook computer shells, films, plastic connectors , Graphic marking and cutting on silicone rubber keys, SMD components and other various materials.

1 皮革打标
2 键盘 塑料膜切割
3 低张打标
4 薄膜LOGO切割
5 手机壳打孔
6 女鞋雕刻
7 背光板打点
8 工艺竹简雕刻
9 布面打标
10 亚克力打标
11 IC 打标

行业应用 Application

技术参数 Technical Parameters

机器型号 Machine Type		CO2-T300	CO2-T400	CO2-T500	CO2-D200	CO2-HANS200	CO2-MP-G120	CO2-H180i	CO2-MP-H320i
激光特性 Laser Character	CO2 激光 Laser	波长：10.6μm							
	最大功率 Max. power	300W	400W	500W	200W		120W	180W	320W
	功率稳定度 Power Stability	10%	5%	5%	10%		8%	10%	5%
打标范围 Marking Range		650mm×650mm			600mm×600mm		110mm×110mm		
雕刻速度 Carving Speed		≤5m/s							
最小线宽 Min. width		0.16mm					0.1mm		
最小字符 Min. character		1mm					0.6mm		
重复精度 Duplicate Accuracy		0.01mm							
防护等级 Protection Level		IP54							
冷却方式 Cooling Method		水冷 Water Cooling							
电源电压 Voltage		三相(three-phase) AC 220V/80A			单相(single-phase) AC 220V/20A				三相(three-phase) AC 220V/80A
功耗 Power Consumption		10kW	10kW	17kW	4kW				10kW
最佳使用环境 Best Use Environment	温度 Temperature	15℃~30℃							
	湿度 Humidity	45%～75%							
外形尺寸 (长*宽*高) Dimensions (L*W*H)	光学系统 Optical System	2115×730×1400mm			1770×200×245mm		1780×415×1190mm		2115×730×1400mm
	控制系统 Control System	1020×570×960mm			671×555×821mm				1020×570×960mm
	制冷系统 Refrigerating System	800×555×1028mm			700×400×700mm				800×555×1028mm
重量 Weight	光学系统 Optical System	350kg			55kg				350kg
	控制系统 Control System	172kg			105kg				172kg
	制冷系统 Refrigerating System	105kg			80kg				105kg

注：1. 最小字符和最小线宽会因材料不同，标记深度不同而有区别；2. 由于产品不断更新，一切配置以我公司最新产品价目手册为准。

Note: 1. The minimum character and minimum line width will be different due to different materials and different marking depths; 2. Due to the continuous updating of products, all configurations are subject to the latest product price book of our company.

CO₂-H30激光打标机 CO₂-H30 Laser Marking Machine

小功率进口激光器，后聚焦，分体式设备，ＸＹＺ三维工作平台，水冷机型。可广泛用于工艺礼品、有机玻璃、食品包装、电子元器件、PCB条码、柔性线路板、陶瓷基片、半导体、晶体玻璃、塑料连接器、硅橡胶按键、SMD元件以及其他各种材料上的图文标记。

Low-power imported laser, post-focusing, split-type equipment, XYZ three-dimensional work platform, water-cooled model. Can be widely used in craft gifts, plexiglass, food packaging, electronic components, PCB barcodes, flexible circuit boards, ceramic substrates, semiconductors, crystal glass, plastic connectors, silicone rubber buttons, SMD components and other materials on Graphical markers.

CO₂-G10/D30/H55i激光打标机 CO₂-G10/D30/H55i Laser Marking Machine

小功率进口激光器，后聚焦，一体化设备，可升降主梁，可扩展加工平面，风冷机型。可广泛用于工艺礼品、食品包装、电子元器件、PCB条码、柔性线路板、陶瓷基片、半导体、晶体玻璃、塑料连接器、硅橡胶按键、SMD元件以及其他各种材料上的图文标记。

Low-power imported laser, post-focusing, integrated equipment, can lift the main beam, expand the processing plane, air-cooled model. Can be widely used in craft gifts, food packaging, electronic components, PCB barcodes, flexible circuit boards, ceramic substrates, semiconductors, crystal glass, plastic connectors, silicone rubber keys, SMD components and other various materials on the graphic marking .

CO₂-H120激光打标机 CO₂-H120 Laser Marking Machine

大功率激光打标机，后聚焦，分体式设备，ＸＹＺ三维工作平台，水冷机型。可广泛用于工艺礼品、有机玻璃、服装皮革、木头纸张、食品包装、电子元器件、PCB条码、柔性线路板、陶瓷基片、半导体、晶体玻璃、塑料连接器、硅橡胶按键、SMD元件以及其他各种材料上的图文标记。

High-power laser marking machine, rear focus, split type equipment, XYZ three-dimensional work platform, water-cooled model. Can be widely used in craft gifts, plexiglass, clothing leather, wood paper, food packaging, electronic components, PCB barcodes, flexible circuit boards, ceramic substrates, semiconductors, crystal glass, plastic connectors, silicone rubber keys, SMD components and Graphical markings on various other materials.

CO₂-K120/S60XP激光打标机 CO₂-K120/S60XP Laser Marking Machine

大功率进口激光器，前聚焦，分体式设备，大幅面工作平台，水冷机型。可广泛用于工艺礼品、有机玻璃、服装皮革、木头纸张、食品包装、电子元器件、PCB条码、柔性线路板、陶瓷基片、半导体、晶体玻璃、塑料连接器、硅橡胶按键、SMD元件以及其他各种材料上的图文标记级切割。

High-power imported laser, front focus, split equipment, large-format working platform, water-cooled model. Can be widely used in craft gifts, plexiglass, clothing leather, wood paper, food packaging, electronic components, PCB barcodes, flexible circuit boards, ceramic substrates, semiconductors, crystal glass, plastic connectors, silicone rubber keys, SMD components and Graphical mark-level cutting on various other materials.

行业应用 Application
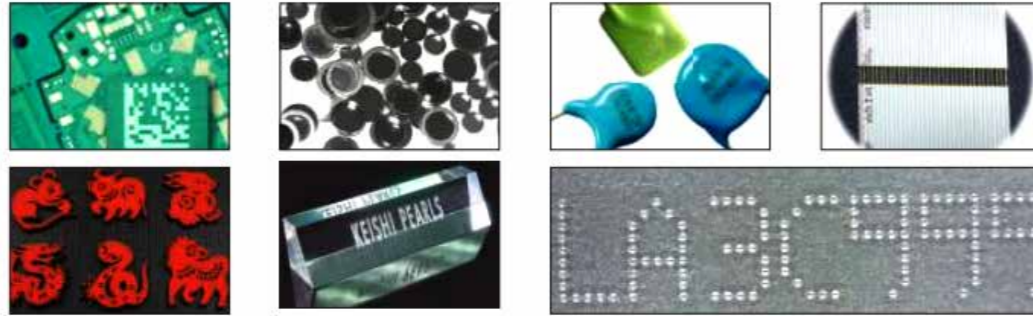
技术参数 Technical Parameters

机器型号 Machine Type		CO₂-H30	CO₂-H120	CO₂-S60XP	CO₂-K120	CO₂-H55i	CO₂-D30	CO₂-G10
激光特性 Laser Characteristics	CO₂ 激光 CO₂Laser	波长 wavelength：10.6μm						
	最大功率 Max. power	30W	120W	60W	120W	55W	30W	10W
	功率稳定度 Power Stability	±5%	±10%			±5%	±5%	±10%
打标范围 Marking Range		110mm×110mm		400mm×400mm				50mm×50mm
雕刻速度 Engraving Speed		≤3m/s						
最小线宽 Min. Line Width		0.12mm	0.12mm					0.05mm
最小字符 Min. Character		0.6mm	0.6mm					0.2mm
重复精度 Repeatability		±0.01mm						
防护等级 Protection Class		IP54						
冷却方式 Cooling Method		水冷 Water Cooling				风冷 Air Cooling		
电源电压 Voltage		220V/10A	220V/20A			220V/10A	220V/7A	220V/7A
功耗 Power Consumption		1.5kW	4.5kW			2kW	900W	300W
最佳使用环境 Best Use Environment	温度 Temperature	15℃~30℃						
	湿度 Humidity	45%～75%						
外形尺寸 (长*宽*高) Dimensions (L*W*H)	光学系统 Optical System	710×121×180mm	1700×210×300mm	1700×190×300mm		1120×620×1370mm		
	控制系统 Control System	671×555×821mm				一体机 One Machine		
	制冷系统 Refrigerating System	700×400×700mm				风冷 Air Cooling		
重量 Weight	光学系统 Optical System	30kg	60kg	55kg		110kg		
	控制系统 Control System	95kg				一体机 One Machine		
	制冷系统 Refrigerating System	58kg				风冷 Air Cooling		

注：1. 最小字符和最小线宽会因材料不同、标记深度不同而有所区别；2. 由于产品不断更新，一切配置以我公司最新产品价目手册为准。

Note: 1. The minimum character and minimum line width will be different due to different materials and different marking depths; 2. Due to the continuous updating of products, all configurations are subject to the latest product price book of our company.

CO₂-TD30-2A 激光双头剥线机 / CO₂-YLP20-1A 光纤激光双头剥线机

CO₂-TD30-2A Laser Double Head Wire Stripper / CO₂-YLP20-1A Fiber Laser Double Head Wire Stripper

激光双头剥线机能实现线材的快速剥除外壳以及漆包线的外漆去除工作，能有效的节约人工与耗材的成本。降低了产品的损坏率，提高产品的市场效率。

The laser double-head wire stripping machine can quickly strip the shell of the wire and remove the outer paint of the enameled wire, which can effectively save the cost of labor and consumables. It reduces the damage rate of the product and improves the market efficiency of the product.

行业优势 Advantages

◆ 加工时与线材不接触，无加工应力，不会扯断内部线芯；
◆ 剥线更干净、无残留，无损伤；
◆ 操作更容易；
◆ 剥线速度快；
◆ 精度更高；
◆ 安装维护简便。

◆ No contact with the wire during processing, no processing stress, and no tearing of the internal wire core;
◆ The stripping is cleaner, without residue, and without damage;
◆ Easier to operate;
◆ Fast stripping speed;
◆ Higher precision;
◆ Easy to install and maintain.

应用样品 Sample Pictures

技术参数 Technical Parameters

机型 Model	CO₂ -B60	CO₂ -B120
激光器 Laser	采用上下两个激光器同时工作，剥线正面及反面 Use two lasers up and down to work at the same time, strip the front and back of the wire	采用单个个激光器分别上下出光，剥线正面及反面 Use a single laser to emit light up and down respectively, strip the front and back of the wire
激光功率 Laser Power	30W(可搭配 can be matched 10W 30W 55W 60W 80W 激光器 Laser)	20W(可搭配 can be matched 10W 30W 等功率激光器 laser)
剥线范围 Stripping Range	160mm×160mm	100mm×100mm
冷却方式 Cooling Method	风冷 Air Cooling	风冷 Can be matched
适合线材 Suitable Wire	线材直径 Wire Diameter≤5MM	线材直径 Wire Diameter≤3MM
外形尺寸（长*宽*高) Dimensions (L*W*H)	992×611×1230mm	1000×611×1230mm
精确定位 Accurate Locating	红光预览，精确可调的上下对位方式，有效避免线正反面错位 Red light preview, precise and adjustable up and down alignment method, effectively avoid the misalignment of the front and back of the line	

CO$_2$-PCB500自动化PCB激光打标系统
CO$_2$-PCB500 Automatic PCB Laser Marking System

CO$_2$-PCB 500自动化PCB激光打标系统,可实现对PCB板进料、定位、打标、自动翻板、出料的全自动化工作。即操作人员只需将PCB板放到进料处,在出料处取走标记好的PCB板即可。

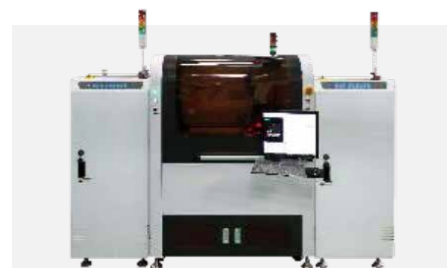该设备主要针对PCB行业的动态打标(一维码、二维码、生产批号、字符等)设计。设备各技术参数主要依据PCB行业 标准SMEMA标准,方便与用户上下料生产线对接,并可对标记的一维码、二维码等进行校验,还具有离线单独标记的功能。

CO$_2$-PCB 500 automatic PCB laser marking system can realize fully automatic work of PCB board feeding, positioning, marking, automatic flipping and discharging. That is, the operator only needs to put the PCB board at the feeding place, and take the marked PCB board from the feeding place.

The equipment is mainly designed for dynamic marking (one-dimensional code, two-dimensional code, production batch number, characters, etc.) in the PCB industry. The technical parameters of the equipment are mainly based on the PCB industry standard SMEMA standard, which is convenient for docking with the user's loading and unloading production line, and can verify the marked one-dimensional code, two-dimensional code, etc.

设备特点　Features

✦ 配置高性能进口CO$_2$激光器。
✦ 进口CCD和读码器,实现自动定位和在线读码,评级。
✦ 数据可与客户ERP/ MES/ PMS系统进行互联。
✦ 自主研发专门用于PCB行业的打标软件,界面操作简单易学,可根据客户不同需求进行定制。
✦ 可实现在线或离线打标。

✦ Equipped with high-performance imported CO$_2$ laser.
✦ Imported CCD and code reader to realize automatic positioning and online code reading and rating.
✦ Data can be interconnected with customer ERP/MES/PMS system.
✦ Independent research and development of marking software specially used in the PCB industry, the interface operation is simple and easy to learn, and can be customized according to different needs of customers.
✦ On-line or off-line marking can be realized.

CO$_2$-PCB500D PCB行业专用激光打标系统
CO$_2$-PCB500D Laser Marking System for PCB Industry

CO$_2$ - PCB 500D PCB激光打标系统,可实现对PCB板进料、定位、打标、出料的全自动化工作。即操作人员只需将PCB板放到进料处,并在出料处取走标记好的PCB板即可。

该设备主要针对PCB行业的动态打标(一维码、二维码、生产批号、字符等)设计。设备各技术参数主要依据PCB行业 标准SMEMA标准,方便与用户上下料生产线对接,并可对标记的一维码、二维码等进行校验,还具有离线单独标记的功能。

CO$_2$-PCB 500 automatic PCB laser marking system can realize fully automatic work of PCB board feeding, positioning, marking, automatic flipping and discharging. That is, the operator only needs to put the PCB board at the feeding place, and take the marked PCB board from the feeding place.

The equipment is mainly designed for dynamic marking (one-dimensional code, two-dimensional code, production batch number, characters, etc.) in the PCB industry. The technical parameters of the equipment are mainly based on the PCB industry standard SMEMA standard, which is convenient for docking with the user's loading and unloading production line, and can verify the marked one-dimensional code, two-dimensional code, etc.

设备特点　Features

✦ 配置高性能CO$_2$激光器。
✦ 进口CCD和读码器,实现自动定位和在线读码,评级。
✦ 可实现双头双面同时打标,大幅提高生产效率。
✦ 自主研发专门用于PCB行业的打标软件,界面操作简易学,可根据客户不同需求进行定制。
✦ 可实现在线或离线打标

✦ Equipped with high-performance CO$_2$ laser.
✦ Imported CCD and code reader to realize automatic positioning and online code reading and rating.
✦ It can achieve double-sided and double-sided marking at the same time, greatly improving production efficiency.
✦ Independent research and development of marking software specially used in PCB industry, the interface operation is simple and easy to learn, and can be customized according to different needs of customers.
✦ Online or offline marking possible

应用样品　Sample Pictures
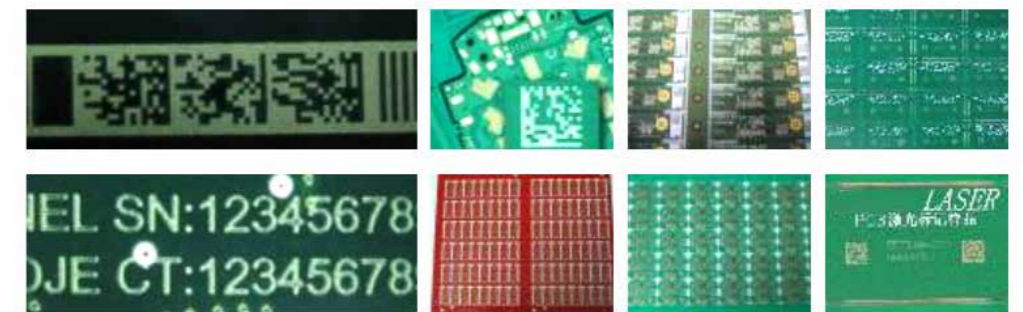
技术参数　Specifications

机型 Model	CO$_2$-PCB500	CO$_2$-PCB500D
适用 PCB 板尺寸范围 Applicable PCB Size Range	宽度范围 Width Range 50mm~500mm　长度范围 Length Range 50mm~500mm　厚度范围 Thickness Range 0.8mm~4mm	
适用上下料生产线高度 Applicable Height Of Loading And Unloading Production Line	900mm 可调节范围 Adjustable Range：880～930mm，	
X-Y 平台行程 X-Y Platform Travel	550mm×550mm	550mm×550mm
运动速度 Movement Speed	150~400mm/s	150~400mm/s
重复定位精度 Repeatability	±0.05mm	±0.05mm
打标重复定位精度 Marking Repeatability Accuracy	±0.15mm（系统综合精度 System Comprehensive Accuracy）	±0.15mm（含 CCD 精度 With CCD Accuracy）
皮带传输速度 Belt Transmission Speed	100~400mm/s	100~400mm/s
工作系统外形尺寸(长*宽*高) Working System Dimensions (L*W*H)	1600×1000×1600mm	1700×1200×1600mm 包含上下板机长 Including the Upper and Lower Board Captain2000mm
工作台电源要求 Workbench Power Requirements	220V 单相 single-phase ±５％，50Hz	AC 220V 单相 single-phase ±５％，50Hz
气源要求 Air Source Requirements	0.4~0.8Mpa 洁净空气，进气口 Φ８ 0.4~0.8Mpa clean air, air inlet Φ8	0.4~0.8Mpa 洁净空气，进气口 Φ８ 0.4~0.8Mpa clean air, air inlet Φ8
设备总功率 Total Equipment Power	3KW	6KW
设备总质量 Total Equipment Mass	600kg	900kg