

激光智能装备

LASER SMART EQUIPMENT

二维激光切割 | 三维激光切割 | 激光焊接 | 自动化+

2D laser / 3D laser / Laser welding / Automation System+

**Yawei**亚威

股票代码 002559

Stock Code 002559

# 做世界一流的高端装备与 智能制造解决方案供应商

TO BE THE WORLD'S LEADING HIGH-END EQUIPMENT AND SMART  
MANUFACTURING SOLUTION PROVIDER

江苏亚威机床股份有限公司（简称亚威股份，股票代码002559）是国内知名的高端装备及智能制造解决方案供应商，创建于1956年，位于江苏省扬州市，2011年在深交所上市，为汽车、交通、航空、航天、钣金、电力电气、电梯、家电、显示面板、半导体、新能源等各大行业的知名企业提供金属成形机床、激光加工设备、工业机器人、自动化生产线、工厂管理软件及面向多行业的智能车间/智能工厂解决方案。目前公司占地面积60万m<sup>2</sup>，在职员工1900余人，在国内设有60个集销售、服务于一体的办事处，在国外60多个国家设有销售代理机构。

Jiangsu Yawei Machine Tool Co., Ltd. (Abbreviated as Yawei, stock code 002559) is a well-known supplier of high-end equipment and intelligent manufacturing solutions. Founded in 1956, it is located in Yangzhou City, Jiangsu Province. In 2011, it was listed on the SME Board of Shenzhen Stock Exchange market, Yawei provides sheet metal forming machines, laser processing equipment, industrial robots, automatic production lines, factory management software, and intelligent workshops for well-known companies in the automotive, transportation, aviation, sheet metal, power and electrical, elevators, and home appliances industries. At present, the company covers an area of 600,000 M<sup>2</sup>, with more than 1,900 employees, 60 domestic sales and service offices, and sales agent network in more than 60 countries.



# CATALOGUE

## 目录

企业简介 Company Introduction	04
发展历程 Historic Milestones	06
二维激光切割 2D Laser	08
三维激光切割 3D Laser	22
激光焊接 Laser Welding	26
自动化+ Automation System+	34
优质部件 High Quality Components	42
先进技术 Advanced Technologies	43
应用广泛 Wide Applications	45
智联未来 Smart Connecting Future	46
一流服务 First-class Service	47

# C 公司简介 Company Introduction

结合多年行业经验，经过持续开拓延伸，亚威股份已经形成了二维和三维并存，高中低功率齐备，切割、切管、焊接、熔覆、超精密微纳激光加工等领域全覆盖的激光加工装备产品体系，具备年产1000台套以上高功率激光切割、激光焊接设备与自动化系统的生产能力，为中高端客户提供全方位的激光智能装备及服务。

Combining years of industry experience and continuous development and extension, Yawei shares have formed 2D and 3D coexistence, high, medium and low power, full coverage of laser processing in cutting, pipe cutting, welding, cladding, ultra-precision micro-nano laser processing and other fields. The equipment product system has an annual production capacity of more than 1,000 sets of high-power laser cutting, laser welding equipment and automation systems, providing a full range of laser intelligent equipment and services for middle and high-end customers.



- 历经多年研发和创新，融汇国际最前沿激光应用技术，性能与价值的完美结合
- 结构设计更优，效率更高，搭载国际领先的光纤激光器，满足不同行业的客户需求
- 60多年机床制造经验沉淀，现代化精益生产管理，国际一流的供应商战略合作，确保机器长期运行可靠，精度持久不变
- After years of R&D and innovation, it integrates the most cutting-edge laser application technology in the world, and the perfect combination of performance and value
- Better structural design, higher efficiency, equipped with world-leading fiber lasers, to meet the needs of customers in different industries
- More than 60 years of experience in machine tool manufacturing, modern lean production management, strategic cooperation with international first-class suppliers, ensure long-term reliable operation of the machine, and lasting accuracy

## 2007

自主研发CO<sub>2</sub>激光切割机实现销售突破  
Independent research and develop of CO<sub>2</sub> laser cutting machine to achieve sales breakthrough

## 2013

与意大利Prima-Power合作，行业一流水平的高功率激光切割机投放市场

In cooperation with Italian Prima-Power, developing the industry-leading high-power laser cutting machine

## 2014

1.4亿元收购无锡创科源激光装备有限公司，布局三维激光业务

Acquired Wuxi CKY Laser Equipment Co., Ltd. with RMB 140 million to deploy 3D laser business

- 崭新外观、模块化设计、智能化主机与自动化解决方案，全生命周期健康管理、尽解后顾之忧
- Brand-new appearance, modular design, intelligent host and automation solutions, full life cycle health management, relieve all the worries

## 2016

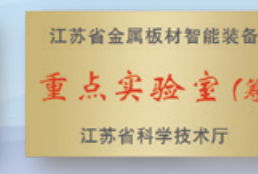
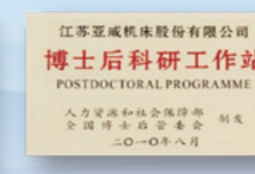
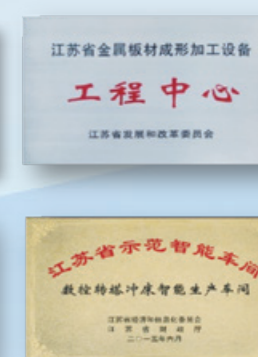
与浙江工业大学合作成立研发中心，拓展三维机器人切割、高功率激光焊接熔覆等技术应用

Set up a research and development center in cooperation with Zhejiang University of Technology to expand the application of 3D robotic cutting, high-power laser welding and cladding

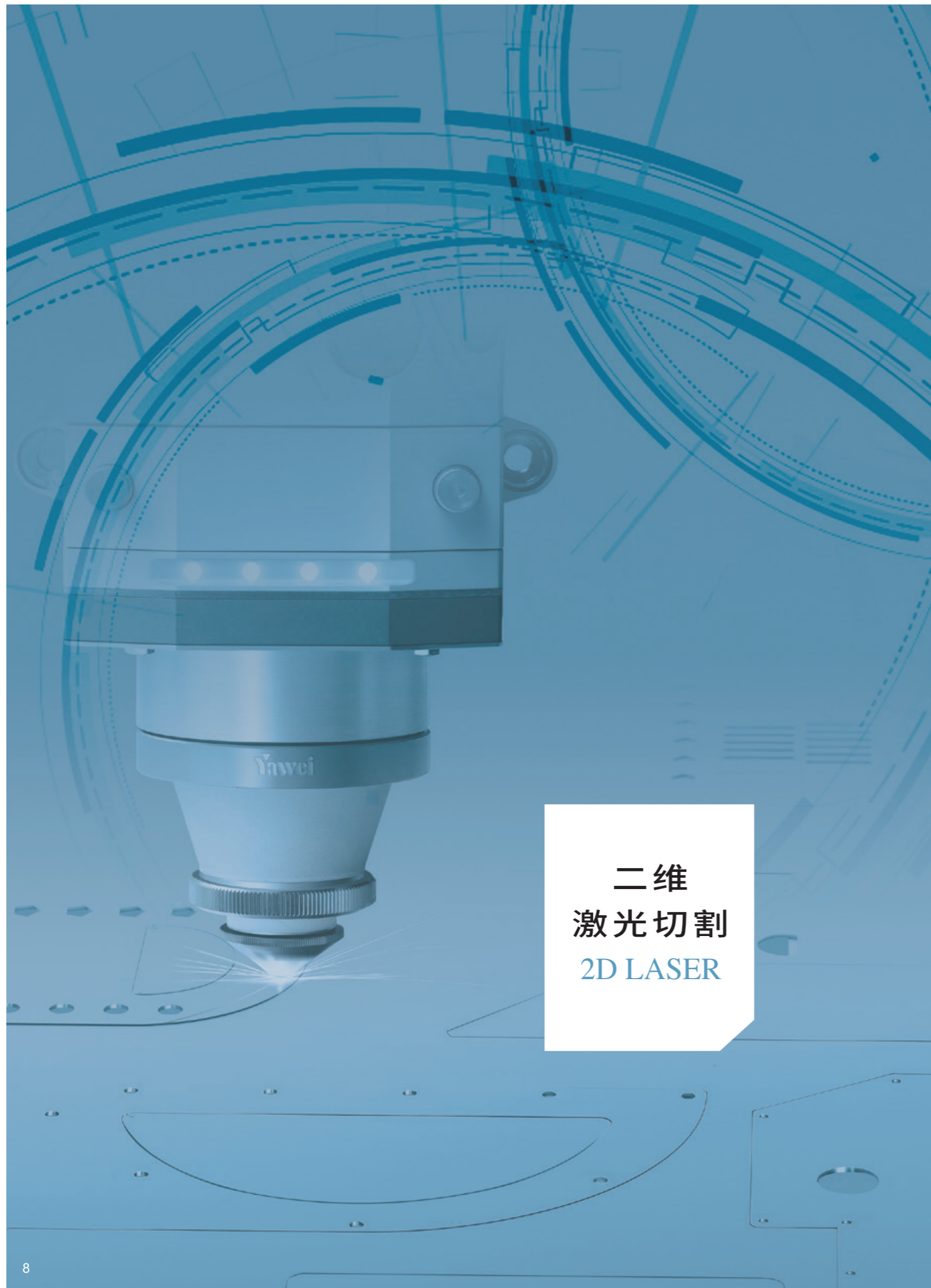
## 2019

亚威股份通过“走出去+引进来”的跨境投资并购策略，联手建泉亚威沅盈产业基金、苏州工业园区重大产业项目投资基金等投资人，战略性投资面板行业领先的OLED激光加工企业

In 2019, through the cross-border investment and M&A strategy of "going out + bringing in", Yawei Shares joined forces with investors such as the Binqun Yawei Fengying Industrial Fund and the Suzhou Industrial Park Major Industrial Project Investment Fund to strategically invest in the leading OLED laser processing company in the panel industry



- 国家级博士后科研工作站
- 国家两化融合管理体系评定
- 省两化融合转型升级示范企业
- 全国质量先进单位
- 省金属板材智能装备重点实验室
- 省示范数字化车间
- 全国五一劳动奖状
- 省金属板材成形设备工程中心
- 国家技术创新示范企业
- National Postdoctoral Research Station
- Evaluation of the National Integration of Industrialization and Industrialization Management System
- Provincial Demonstration Enterprise for Integration of Industrialization
- National Advanced Quality Unit
- Provincial Key Laboratory of Sheet Metal Intelligent Equipment
- Provincial Demonstration Digital Workshop
- National May 1st Labor Certificate
- Provincial Sheet Metal Forming Equipment Engineering Center
- National Technological Innovation Demonstration Enterprise



二维  
激光切割  
2D LASER



01 精致设计

Small and exquisite

紧凑型设计，减少占地面积，节约场地成本  
Compact structure and small footprints

02 随心所欲

Omnipotent

敞开式板材切割区域，便于上下料，适应多种环境

The cutting area is open for easy loading and unloading, adapting to a variety of venues and use environments

HLA 敞开式激光切割机

HLA open-type laser cutting machine

03 匠心床身

Durable Machine Body

一体式榫卯板焊床身，一次加工成型，配合直线导轨，实现高精度切割

Integrated mortise and tenon plate welding machine bed, processed and formed in one step, equipped with linear guide rails to achieve high-precision cutting

04 坡口切割

Bevel Cutting

可选配±45°坡口切割，切割及焊接一气呵成，节约时间与人力成本

Optional ±45° bevel cutting, cutting and welding can be done in one go, saving time and labor costs



主要技术参数 Key technical parameters

名称	Item	单位 Unit	HLA-1530	HLA-2040	HLA-2060	HLA-2560	HLA-2580	HLA-25120	HLA-30130	
加工范围	Cutting range	mm	3000×1500	4000×2000	6000×2000	6000×2500	8000×2500	12000×2500	13000×3000	
X 轴行程	X axis stroke	mm	3040	4040	6040	6040	8040	12040	13040	
Y 轴行程	Y axis stroke	mm	1520	2020	2020	2520	2520	2520	3020	
Z 轴行程	Z axis stroke	mm	120	120	120	150	150	150	150	
X-Y 轴最大联动速度	X-Y maximum trajectory speed	m/min	140	140	140	140	140	140	140	
X / Y 轴最大加速度	X / Y maximum acceleration	m/s <sup>2</sup>	1.2G	1.2G	1.2G	1.0G	1.0G	1.0G	1.0G	
定位精度	Positioning accuracy	mm	±0.03	±0.03	±0.03	±0.03	±0.03	±0.03	±0.03	
重复定位精度	Repositioning accuracy	mm	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02	
工作台最大载重	Maximum load of worktable	Kg	900	1500	2300	3000	7800/9300	12000/14000	15000/18000	
机床外形尺寸	Machine layout dimension	mm	4700×4500×2000	5800×5000×2000	8300×5000×2000	8400×5500×2000	11000×5500×2000	15000×5500×2000	17000×6000×2000	
整机重量	Machine weight	Kg	4000	5000	7000	10000	12000	18000	23000	
激光发生器功率	Laser generator power	Kw	3 / 6				12 / 20 / 30 / 40 / 50 / 60 / 80			

01 无感穿孔  
Senseless perforation

快速无感穿孔,提高薄板加工效率  
Fast an senseless perforation,increasing thin plate processing efficiency

02 飞行切割  
Flying Cutting

特色切割路径和工艺,实现薄板超快切割,大大提高切割效率  
Special cutting paths and processes enable ultra-fast cutting of thin plates and greatly improve cutting efficiency

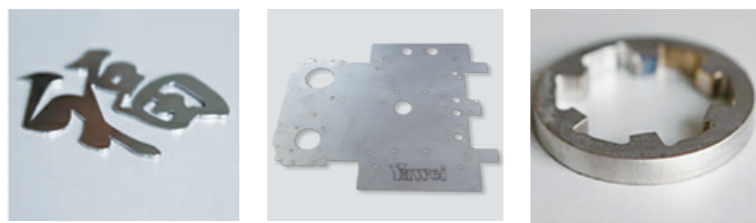


03 总线数控系统  
Bus CNC system

全新总线数控系统,最新闭环随动控制算法,响应速度和随动精度大幅度提升

New bus CNC system, the latest closed-loop follow-up control algorithm, greatly improved response speed and follow-up accuracy

应用于专业钣金、机箱机柜、电力电气、厨具、办公家具、家用电器、装饰广告等行业  
Used in professional sheet metal, chassis cabinets, electrical appliances, kitchen utensils, office furniture, household appliances, decorative advertising and other industries



HLB 中低功率系列激光切割机  
HLB medium and low power series laser cutting machine

04 自动调焦  
Classic inheritance

切割头标配自动调焦,直接用于不同厚度的板材切割,免去更换不同聚焦镜的麻烦

Gantry double-drive bed structure, high-rigidity laser-welded beams, direct exchange of worktables, efficient and stable operation

05 人机交互  
Programming software

标配嵌入式编程软件,超快速编程,超强人机交互体验

standard embedded programming software, easy to operate, easy to learn, perfectly integrated with HMI man-machine interface, super fast programming

06 匠心床身  
Programming software

龙门双驱板焊床身,一次加工成型,无需地基长久稳定运行

standard embedded programming software, easy to operate, easy to learn, perfectly integrated with HMI man-machine interface, super fast programming

主要技术参数 Key technical parameters

名称	Item	单位 Unit	HLB-1530	HLB-2040	HLB-2060	HLB-2560	HLB-2580
加工范围	Cutting range	mm	3000×1500	4000×2000	6000×2000	6000×2500	8000×2500
X轴行程	X axis stroke	mm	3040	4040	6040	6040	8040
Y轴行程	Y axis stroke	mm	1520	2020	2020	2520	2520
Z轴行程	Z axis stroke	mm	240	240	240	300	300
X-Y轴最大联动速度	X-Y maximum trajectory speed	m/min	140	140	140	140	140
X/Y轴最大加速度	X/Y maximum acceleration	m/s <sup>2</sup>	1.2G	1.2G	1.2G	1.0G	1.0G
定位精度	Positioning accuracy	mm	±0.03	±0.03	±0.03	±0.03	±0.03
重复定位精度	Repositioning accuracy	mm	±0.02	±0.02	±0.02	±0.02	±0.02
工作台最大载重	Maximum load of worktable	Kg	700	1400	2000	3000	4000
机床外形尺寸(L×W×H)	Machine layout dimension	mm	8700×4800×2150	11000×5000×2150	15500×5000×2150	15500×5500×2150	20000×5500×2150
整机重量	Machine weight	Kg	7000	8500	12500	17000	22000
激光发射器功率	Laser generator power	Kw	3 / 6				

# HLE 高功率系列激光切割机

## HLE high power series laser cutting machine



### 01 超低气压切割

Ultra-low pressure cutting

不锈钢超低气压切割工艺+亚威新型割嘴，极大降低成本，创造更大价值

Stainless steel ultra-low pressure cutting process + Yawei's new cutting nozzle greatly reduces costs and creates greater value

### 02 雷暴穿孔

thunderstorm perforation

最新雷暴穿孔技术，切割效率提升30%以上

The latest thunderstorm perforation technology increases cutting efficiency by more than 30%

### 03 割嘴冷却

Cutting nozzle cooling

最新割嘴冷却技术，提高割嘴寿命及切割稳定性、切割质量

The latest cutting nozzle cooling technology improves cutting nozzle life, cutting stability, and cutting quality

### 04 智能收刀

Smart knife closing

根据切割工艺，智能调解收到参数，提高断面光滑度和完整度

According to the cutting process, the received parameters are intelligently adjusted to improve the smoothness and integrity of the section

### 05 智能套料

Intelligent nesting

高效自动套料软件，配合图型实施模拟，编程得心应手，事半功倍

Efficient automatic nesting software, combined with graphics to implement simulation, makes programming easy and gets twice the result with half the effort

### 06 总线数控系统

Bus CNC system

全新总线数控系统，最新闭环随动控制算法，响应速度和随动精度大幅度提升

New bus CNC system, the latest closed-loop follow-up control algorithm, greatly improved response speed and follow-up accuracy

主要技术参数 Key technical parameters

名称	Item	单位 Unit	HLE-1530	HLE-2040	HLE-2060	HLE-2560	HLE-2580	HLE-25100	HLE-25120
加工范围	Cutting range	mm	3000×1500	4000×2000	6000×2000	6000×2500	8000×2500	10000×2500	12000×2500
X 轴行程	X axis stroke	mm	3040	4040	6040	6040	8040	10040	12040
Y 轴行程	Y axis stroke	mm	1520	2020	2020	2520	2520	2520	2520
Z 轴行程	Z axis stroke	mm	240	240	240	300	300	300	300
X-Y 轴最大联动速度	X-Y maximum trajectory speed	m/min	140	140	140	140	140	140	140
X/Y 轴最大加速度	X/Y maximum acceleration	m/s <sup>2</sup>	1.5G	1.5G	1.5G	1.5G	1.5G	1.5G	1.5G
定位精度	Positioning accuracy	mm	±0.03	±0.03	±0.03	±0.03	±0.03	±0.03	±0.03
重复定位精度	Repositioning accuracy	mm	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02
工作台最大载重	Maximum load of worktable	Kg	700	1400	2000	3000	4000	5000	6000
机床外形尺寸	Machine layout dimension	mm	8700×4800×2150	11000×5000×2150	15500×5000×2150	15500×5500×2150	20000×5500×2150	23500×5500×2150	28000×5500×2150
整机重量	Machine weight	Kg	8000	10000	15000	18000	22500	27000	32000
激光发生器功率	Laser generator power	Kw	12 / 20 / 30 / 40 / 50 / 60 / 80						



# HLF 高性能系列激光切割机

HLF high-performance series laser cutting machine



## 01 高端配置

High end configuration

全套原装SIEMENS数控系统+伺服驱动电机，品牌一致、兼容性更强  
A full set of Siemens CNC system + servo drive motor, consistent brand and stronger compatibility

## 02 卓越性能

Superb Performance

微秒级伺服控制周期速度更快，纳米级插补控制路径更精准  
The microsecond-level servo control cycle is faster and the nano-level interpolation control path is more accurate.

## 03 智能除尘

Smart dust removal

分区式除尘系统，效果大幅提升，少烟环保  
Partitioned dust removal system, greatly improved effect, less smoke and environmental protection

## 04 匠心横梁

Craftsmanship beam

独特的轻量化钢制焊接横梁，重量轻、热变形小，动态性能更好，切割精度更高  
Unique lightweight steel welded beam, light weight, small thermal deformation, better dynamic performance and higher cutting accuracy

## 05 智能守护

Intelligent guard

智能化操作界面全天候设备状态监控与切割专家参数库全面升级  
Intelligent operation interface, all-day equipment status monitoring and comprehensive upgrade of cutting expert parameter library

### 最强大脑 SIEMENS 840DSL

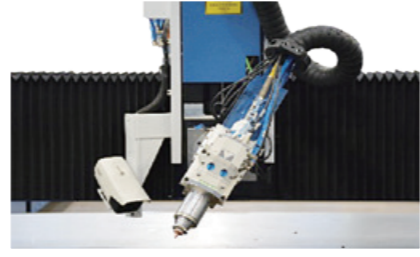
Strongest control system SIEMENS 840DSL



### 主要技术参数 Key technical parameters

名称	Item	单位 Unit	HLF-1530	HLF-2040	HLF-2060	HLF-2560	HLF-2580	HLF-25100	HLF-25120
加工范围	Cutting range	mm	3000x1500	4000x2000	6000x2000	6000x2500	8000x2500	10000x2500	12000x2500
X 轴行程	X axis stroke	mm	3040	4040	6040	6040	8040	10040	12040
Y 轴行程	Y axis stroke	mm	1520	2020	2020	2520	2520	2520	2520
Z 轴行程	Z axis stroke	mm	300	300	300	300	300	300	300
X-Y 轴最大联动速度	X-Y maximum trajectory speed	m/min	170	170	170	140	140	140	140
X / Y 轴最大加速度	X / Y maximum acceleration	m/s <sup>2</sup>	2.0G	2.0G	2.0G	1.8G	1.8G	1.8G	1.8G
定位精度	Positioning accuracy	mm	±0.03	±0.03	±0.03	±0.03	±0.03	±0.03	±0.03
重复定位精度	Repositioning accuracy	mm	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02	±0.02
工作台最大载重	Maximum load of worktable	Kg	1000	1800	2800	5800/7000	7800/9300	9700/11700	12000/14000
机床外形尺寸 (L×W×H)	Machine layout dimension	mm	9300x5000x2200	11500x5500x2200	16000x5500x2200	16000x6000x2200	20500x6000x2200	24500x6000x2200	28500x6000x2200
整机重量	Machine weight	Kg	8000	10000	15000	18500	23500	28000	34000
激光发生器功率	Laser generator power	Kw	3 / 6 / 12 / 20 / 30 / 40 / 50 / 60 / 80						

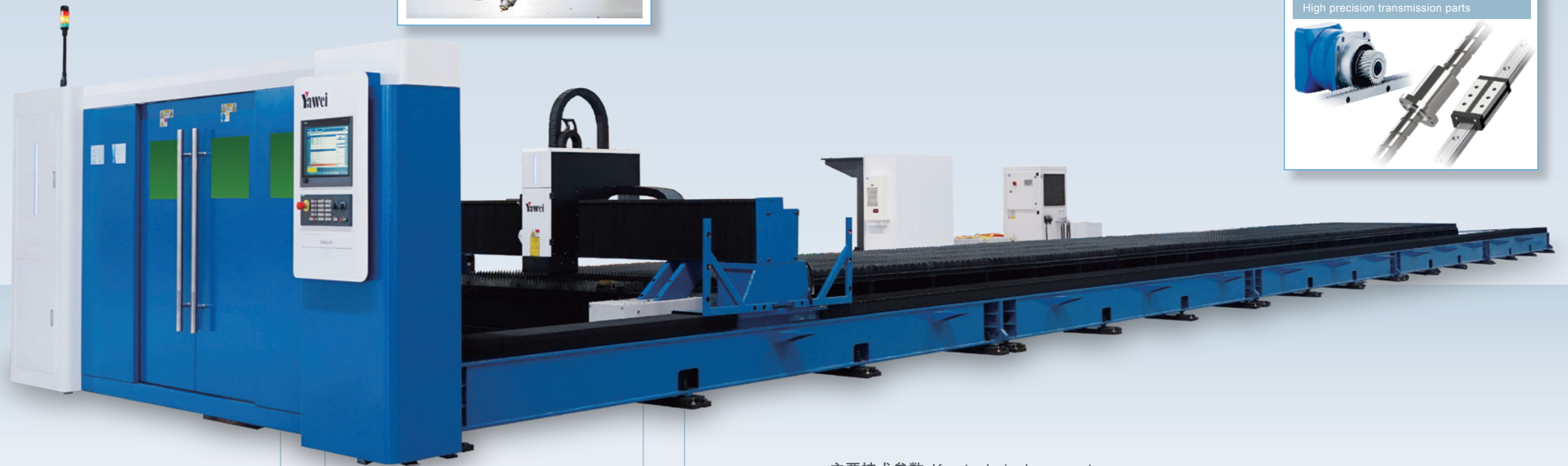
±45°坡口切割 (选配)  
±45° bevel cutting (optional)



# HLG 落地龙门系列激光切割机

HLG floor-standing gantry series laser cutting machine

高精度传动部件  
High precision transmission parts



## 01 专业定制

Professional customization

床身和工作台采用模块化设计，加工大幅面板材得心应手，超长超宽，应付自如  
The bed and workbench adopt a modular design, which makes it easy to process large-format panels. It can handle over-length and width easily

## 03 特色除尘

Featured dust removal

跟随式抽风除尘系统，有效提升除尘能力  
Follow-up exhaust dust removal system effectively improves dust removal capacity

## 02 安全守护

Safety Guard

操作侧全新立体防护罩设计，有效阻挡激光辐射，安全性好，操作无忧  
The new three-dimensional protective cover design on the operating side effectively blocks laser radiation, providing good safety and worry-free operation

## 04 坡口切割

Bevel Cutting

可选配±45°坡口切割，切割及焊接一气呵成，节约时间与人力成本  
Optional ±45° bevel cutting allows cutting and welding in one go, saving time and labor costs

### 主要技术参数 Key technical parameters

名称	Item	单位 Unit	HLG-25120	HLG-30240	其他可定制机型 Other customizable machine
加工范围	Cutting range	mm	2500x12000	3000x24000	(8000-50000) × (2500-5000)
X轴行程	X axis stroke	mm	12040	24040	8040-50040
Y轴行程	Y axis stroke	mm	2520	3020	2520-5020
Z轴行程	Z axis stroke	mm	180	180	180
X-Y轴最大联动速度	X-Y maximum trajectory speed	m/min	90	90	90
X/Y轴最大加速度	X/Y maximum acceleration	m/s <sup>2</sup>	1.0G	1.0G	1.0G
定位精度	Positioning accuracy	mm/10m	±0.1	±0.1	±0.1
重复定位精度	Repositioning accuracy	mm	±0.06	±0.06	±0.06
工作台最大载重	Maximum load of worktable	Kg	11500	28000	根据具体加工幅面而定 Customized according to the specific processing size
机床外形尺寸 (L×W×H)	Machine layout dimension	mm	17000x6500x2200	31500x7000x2200	根据具体加工幅面而定 Customized according to the specific processing size
整机重量	Machine weight	Kg	20000	42000	根据具体加工幅面而定 Customized according to the specific processing size
激光发生器功率	Laser generator power	Kw	12 / 20 / 30 / 40 / 50 / 60 / 80		

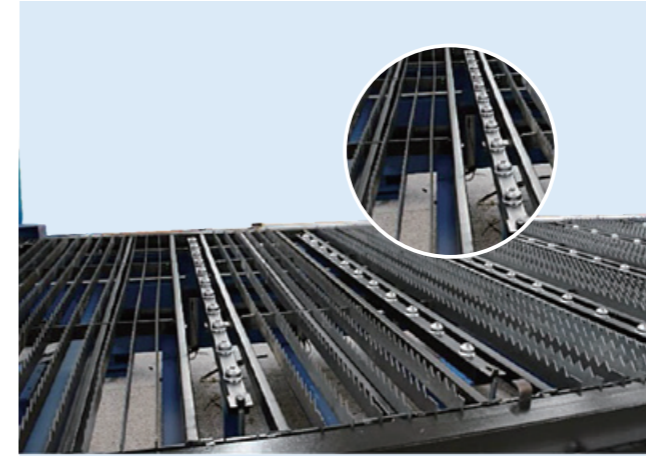
# 丰富配置 灵活搭配

DIVERSIFIED CONFIGURATION AND FLEXIBLE COLLOCATION



## 坡口切割 (选配) Bevel Cutting (Option)

- 可实现±45°坡口切割
- 切割即焊接一气呵成，节约时间与人力成本
- Achieve ±45°bevel cutting
- Welding can be done directly after cutting, saving time and labor cost



## 顶料升降装置 (选配) Pneumatic Sheet Support Device (Option)

- 方便上下料及减少划伤，配有气动顶料装置
- 减少上料时工作台齿钉板对铝板、不锈钢板表面的划伤，杆顶有钢球
- Convenient for loading and unloading, and reduce scratches, equipped with pneumatic jacking device
- Reduce the scratches on the surface of aluminum plate and stainless steel plate, a steel ball to be equipped on the top of jacking rod



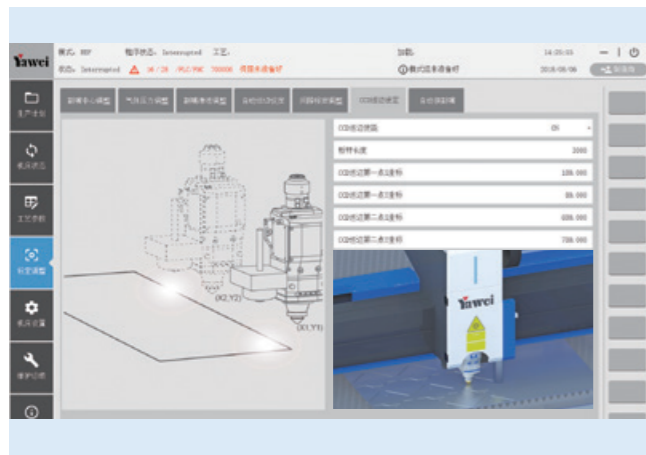
## 液压升降系统 (选配) Hydraulic Lifting System (Option)

- 同步马达实现液压同步升降，负载大、故障低
- Z轴行程更短，满足高速切割
- 分区除尘时除尘效果更好
- Synchronous motor to achieve hydraulic synchronous lifting, with large load and low failure
- Shorter Z-axis travel, to meet high speed cutting
- Zone dust exhausting system with better effect



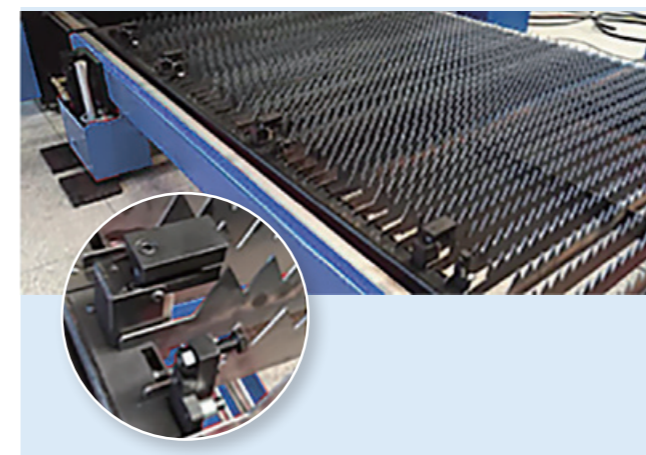
## 可移动操作台 (选配) Movable Operation Station (Option)

- 简化贴标签工序，操作方便快捷
- 前后双屏控制，满足高效切割酣畅体验
- Simplify labelling process, easy and quick operation
- Front and rear dual channel control screen, satisfying efficient cutting experience



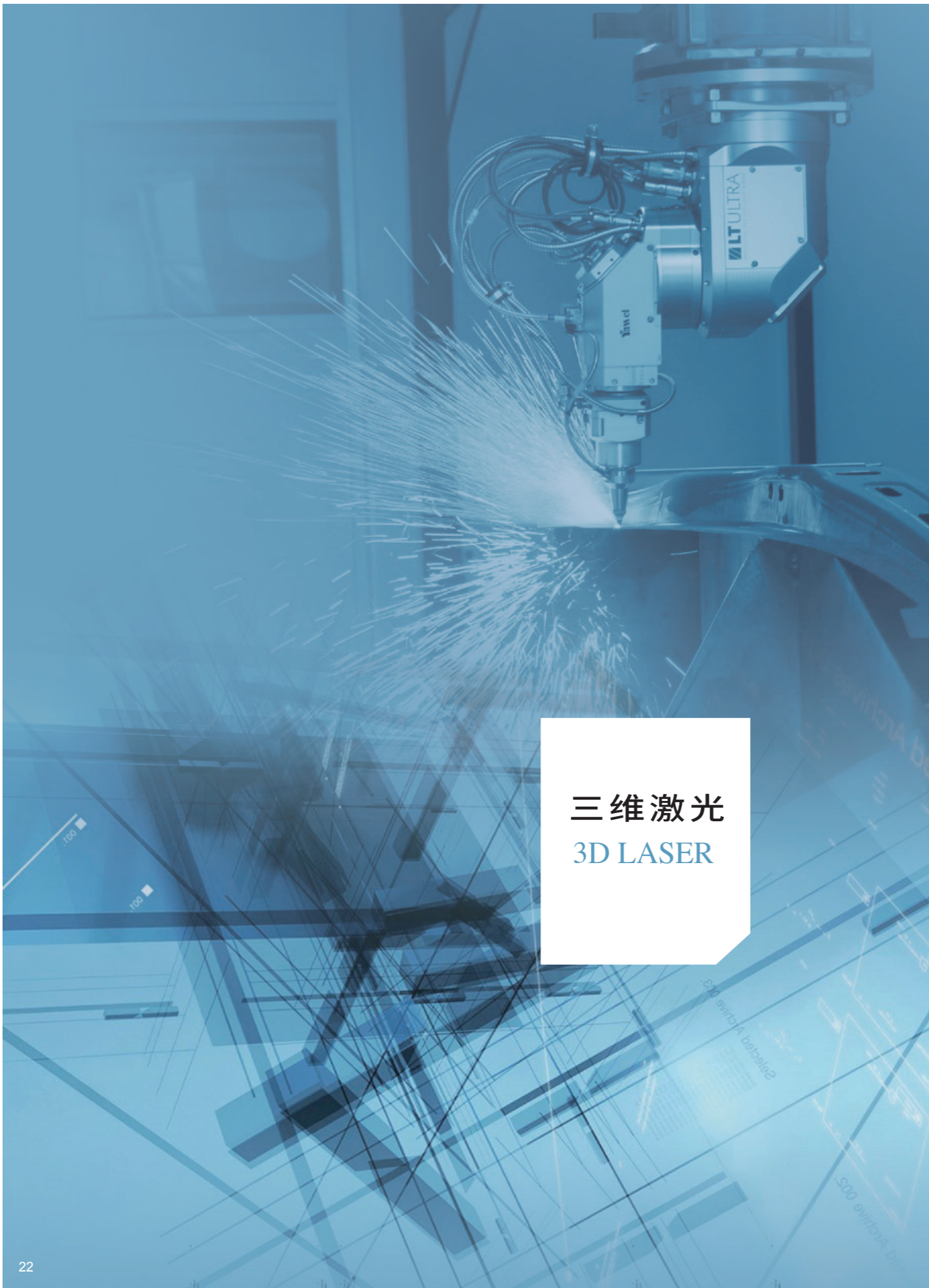
## 光眼二次定位 (选配) Secondary Positioning by Optical Eye (Option)

- 快速定位钣金半成品件，轻松解决二次精密切割
- 自动寻边效率更高、精度更好、更智能
- 密封性好防飞溅，稳定可靠，模块化安装结构
- Fast positioning for semi-finished product, precise secondary cutting
- Higher efficiency of automatic edge finding, better accuracy more intelligent
- Good leakproofness prevents splash, stable and reliable, moduling installation structure



## 气动夹紧装置及侧定位 (选配) Pneumatic Clamps And Side Positioning (Option)

- 可以避免薄板加工过程中辅助气体对板材定位原点的影响
- 减少板材带膜切割时因膜被辅助气体吹起带起板材移动
- Avoid the influence of auxiliary gas on the origin of plate positioning in thin plate processing
- Reduce the movement of plate with film during cutting, when the film is blown up by auxiliary gas



**三维激光**  
3D LASER



### 三维五轴

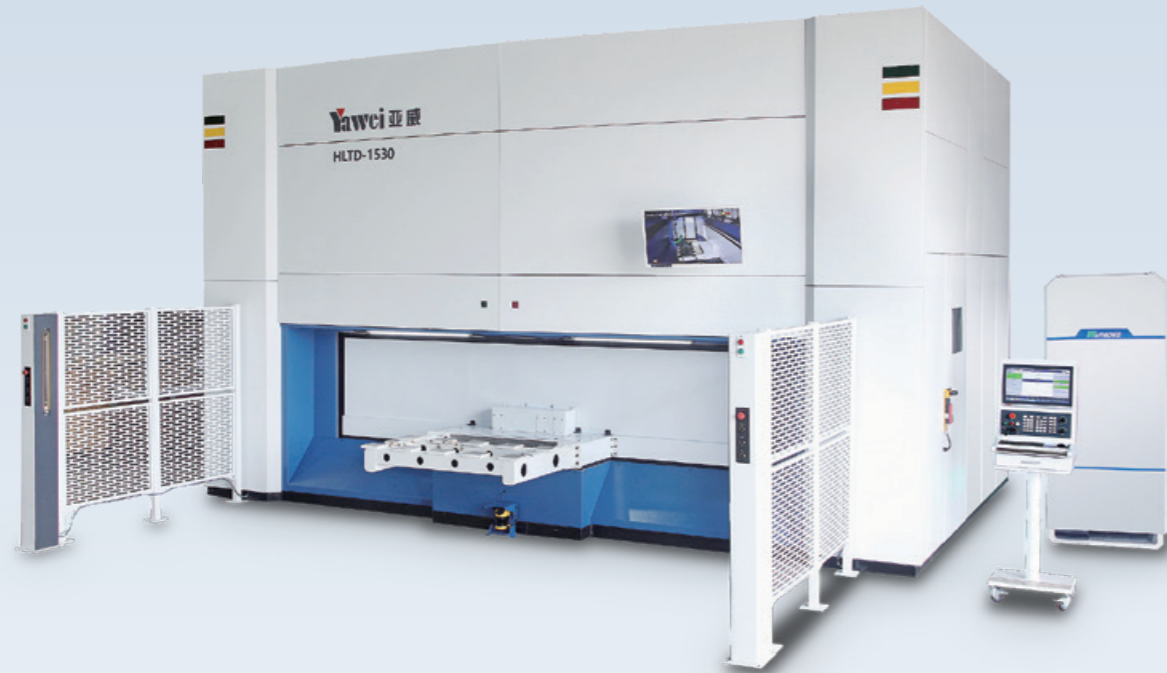
激光切割机  
3D Five-Axis  
Laser Cutting Machine

# 三维五轴激光切割机

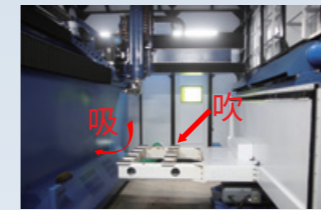
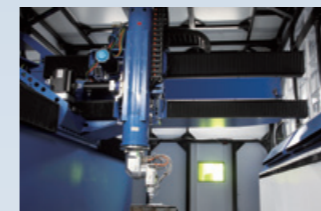
## 3D Five-Axis Laser Cutting Machine

三维五轴激光切割机是一款专为切割三维金属工件的激光加工设备，主要解决热成形件的切孔和修边问题，其特点是精度高、速度快、性能稳定可靠，配置高性能变位机，可满足行业高效率要求。

3D five-axis laser cutting machine is a laser processing equipment designed for 3D metal workpieces. Specialized in cutting and trimming of hot formed parts, with the advantage of high accuracy, fast speed, stable and reliable performance, and equipped with high-performance positioners, 3D five-axis laser cutting machine can meet the industry's High efficiency requirements.



- 采用高刚性斜拉式悬臂结构，结构紧凑，专门用于热成形件的批量切割
- 机床安全防护符合CE国际安全标准
- HLTD系列加工幅面有3000mm×1500mm、4000mm×2000mm
- 高端配置组合，性能比肩进口设备，更少的成本投入，更低的使用维护成本
- High rigidity cantilevered cantilever structure, compact structure, specially used for batch cutting of hot formed parts
- Machine safety protection complies with CE international safety standards
- HLTD series processing size is 3000mm × 1500mm, 4000mm × 2000mm
- High-end configuration combination, performance can equal to imported equipment, less cost investment, lower maintenance costs



应用行业  
Application field

- 德国LTULTRA公司的三维激光切割头，技术先进，质量可靠
- 三维激光加工头具有360°可靠无损的多级防撞保护系统
- 3D laser cutting head from LTULTRA Germany, advanced technology, reliable quality
- The 3D laser machining head has a 360 ° reliable multi-level anti-collision protection system
- 采用悬臂式床身，结构紧凑开放性好
- 整体性强，刚性好，占地面积小
- Adopt cantilevered frame, compact and open
- Strong integrity, good rigidity and small area coverage
- 除尘双通道设计，可最大限度去除加工过程中产生的有害气体和粉尘
- Double-channel dust removal design, remove the harmful gas and dust generated during the process with maximum efficiency



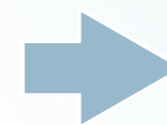
### 性能技术参数 Technical Specification

		项目 Items	单位 Unit	数值 Value
行程 Stroke	X轴行程	X axis stroke	mm	3000
	Y轴行程	Y axis stroke	mm	1500
	Z轴行程	Z axis stroke	mm	650
	C轴转角	Rotating angle of C axis	°	N*360
	A轴转角	Rotating angle of A axis	°	±135
	Q轴行程	Rotating angle of Q axis	mm	±10
速度 Speed	X / Y / Z最大速度	X / Y / Z axis max speed	m/min	100
	X / Y / Z最大加速度	X / Y / Z axis max acceleration	g	1.0
	C / A轴最大速度	C / A axis maximum rotation speed	r/min	120 / 120
	C / A轴最大加速度	C / A axis maximum rotation acceleration	rad/s <sup>2</sup>	60
精度 Precision	X / Y / Z定位精度	X / Y / Z axis positioning accuracy	mm	±0.05
	X / Y / Z重复定位精度	X / Y / Z axis positioning repeat accuracy	mm	0.03
	C / A轴定位精度	C / A axis positioning accuracy	°	0.015
	C / A轴重复定位精度	C / A axis repeat positioning accuracy	°	0.005

激光焊接  
Fiber Laser Welding



YLRW系列  
机器人激光焊接单元  
YLRW series  
Robot Laser Welding unit



HLTW系列  
三维五轴充气柜激光焊接机  
HLTW series  
3D Five-axis Laser Welding machine

## 01 灵活的机械手

Flexible manipulator

根据用户要求选择KUKA、ABB、YASKAWA及FANUC等高精度机械手

According to user requirements to choose KUKA, ABB, YASKAWA, FANUC or other high-precision manipulator



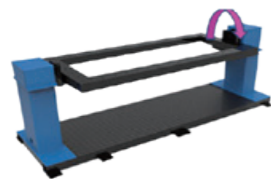
## 02 匹配的变位机

Matched positioner

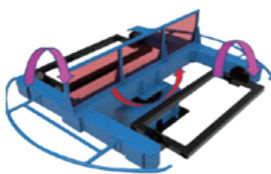
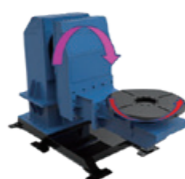
根据用户工件焊接要求可选择单轴、双轴、三轴或多轴焊接变位机

According to requirements of welding piece to choose single axis, two axis, three axis or multi-axis welding positioner

单轴变轴机  
Single-axis positioner



旋转倾斜变轴机  
Rotary tilt positioner



三轴变轴机  
Three-axis positioner

# YLRW系列 机器人激光焊接系统

YLRW Series Robot Laser Welding System



## 03 个性化定制焊接头

Customize welding head

根据不同材质、厚度、焊缝要求匹配自熔、填丝、摆动、振镜、复合焊接头

According to different material, thickness, welding seam to match self-melting, wire filling, swing, vibration mirror, composite welding head  
Customize the welding joint

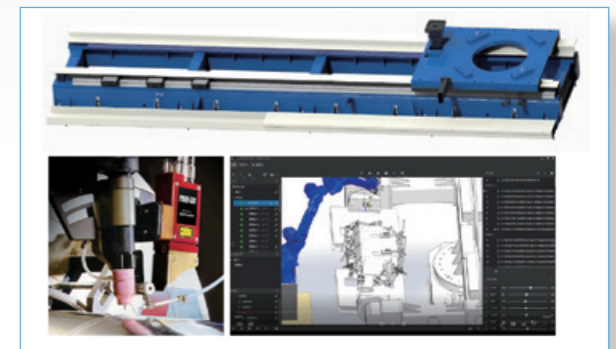


## 04 丰富的选配功能

Abundant optional functions

选配直线移动轴、焊缝跟踪功能、离线编程软件、焊接防护房及烟尘处理系统，轻松应对复杂工况

Linear moving shaft, welding seam tracking function, offline programming software, welding protection room and smoke treatment system, easy to deal with complex working condition



# 机器人激光焊接系统

## Robot Laser Welding System

机器人激光焊接系统可应用于钣金、厨具、机箱机柜等行业的激光焊接需求，具有产品适应面广、效率高等特点；机器长期运行可靠，精度持久不变；模块化设计、通用型备件、全生命周期服务、尽解后顾之忧。

The robotic laser welding system can be applied to the laser welding requirements of sheet metal, kitchenware, cabinets and other industries. It has the characteristics of wide product adaptability and high efficiency; the machine runs reliably for a long time, and the precision is lasting unchanged; modular design, general-purpose spare parts, complete Life cycle service, all worries about the future.



### 性能技术参数 Technical Specification

项目	Items		
激光器参数 Laser parameters	激光器	Laser source	IPG/ 创鑫 IPG/MAX 光纤 / 半导体 Fiber cable/Semiconductor
	激光器波长	Laser wavelength	1080 / 915nm
	平均输出功率	Average output power	6kw 以下 ≤ 6KW
光纤 Fiber cable	光纤型芯	Fiber cable core	50/100( 标配 )/200/400um 50/100(standard)/200/400um
	光纤长度	Fiber cable length	20 / 15m
光学输出特性 Optical output characteristics	聚焦镜头	Focus lens	F=200( 标配 )/250/300mm F=200(standard)/250/300mm
	准直镜头	Collimator lens	F=50/75( 标配 )/100mm F=50/75(standard)/100mm
冷却系统 Cooling system	冷却方式	Cooling type	水冷 Water cooling



### 个性化的上料需求

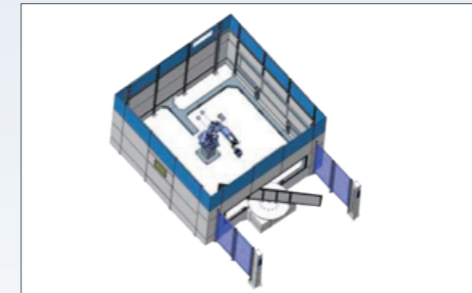
Personalized feeding requirements



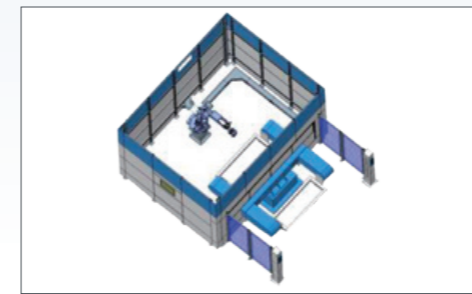
配置双工位 P 型双轴变位机  
Equipped with double-station P-type double-axis positioner



配置双工位首尾相连框架式单轴变位机  
Configure double-station end-to-end frame type single-axis positioner



配置水平单轴变位机  
Configure horizontal single-axis positioner

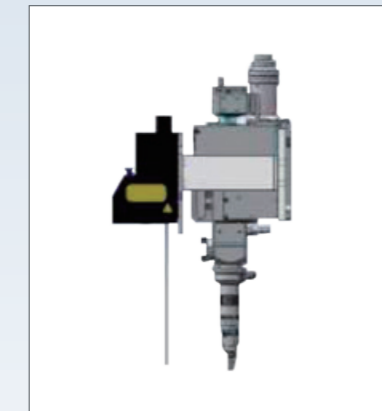
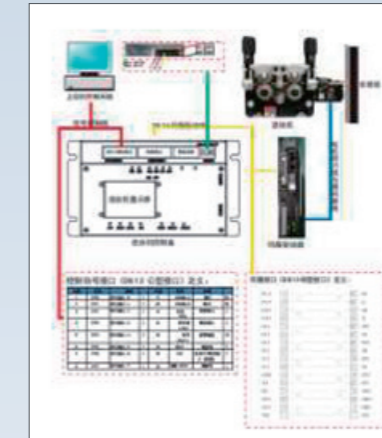


配置水平三轴变位机  
Configure horizontal three-axis positioner



### 丰富的配置

Rich configuration



### 选配自动送丝装置 Optional automatic wire feeding device

用于激光焊接过程，为熔池进行不预热填丝的设备具有体积小，灵活安装，多种控制方式模拟量控制、串口、8pin 并口、屏幕控制

Used in the laser welding process to fill the molten pool without preheating the wire equipment  
With small size, flexible installation, multiple control methods: analog control, serial port, 8pin parallel port, screen control

### 选配激光焊缝自动跟踪装置 Optional laser welding seam automatic tracking device

使用激光器、光学传感器和中央处理器，利用光学传播与成像原理，得到激光扫描区域内各个点的位置信息，通过复杂的程序算法完成对常见焊缝的在线实时检测

Using lasers, optical sensors and CPU, using the principle of optical propagation and imaging, the position information of each point in the laser scanning area is obtained, and the online real-time detection of common welds is completed through complex program algorithms

### 选配激光焊接头防撞装置 Optional laser welding head anti-collision device

防撞装置是为了保护机器人末端的激光焊接头因发生碰撞而不被损坏，防撞装置的特点包括：自动复位、高重复性、强大的抗力矩和转矩的能力

The anti-collision device is to protect the laser welding head at the end of the robot from being damaged due to collision. The features of the anti-collision device include: automatic reset, high repeatability, strong torque resistance and rotation Moment ability

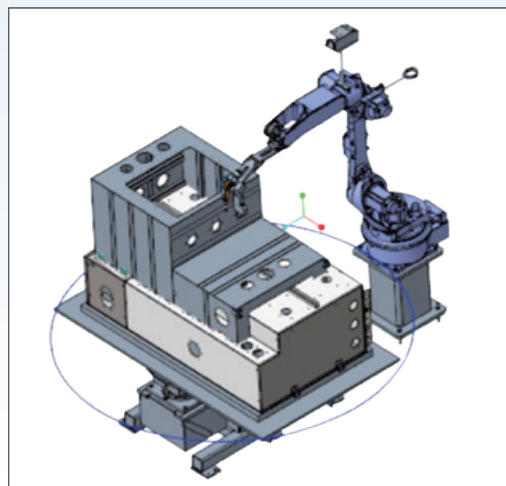


## 机器人充气柜激光焊接机

Robot inflatable cabinet laser welding machine



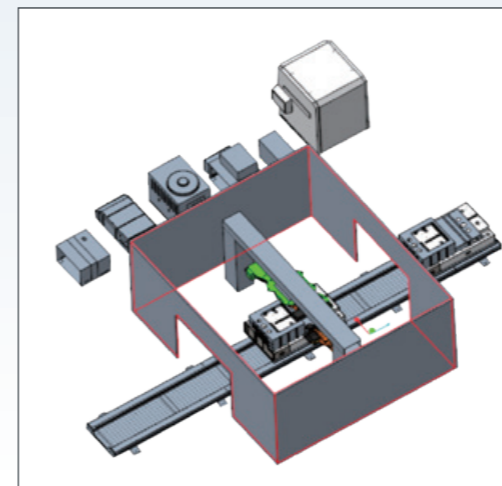
- 采用机器人激光焊接工艺，焊缝美观、焊接变形小，适用于对焊接外观及变形要求较高的产品焊接
- 组合方式可分为地面式或倒挂式机械手，根据产品要求不同，可选配摆动焊接头、进口/国产不同芯径发生器、同轴/侧吹保护气体
- 激光焊接速度可达2000mm~3000mm/min，焊接速度是弧焊的3~4倍，生产效率高
- 内置激光焊接工艺专家库，根据气箱种类不同选择焊接工艺，减少辅助时间
- 选配移动地轨、变位机及工装夹具，满足产品焊接及装夹需求
- 配置焊接房和除尘系统，满足安人生产及环评要求
- 配置视频监控显示系统，方便焊接过程全过程监控
- 个性化订制上位机系统，可与客户MES生产管理系统互联
- Using robotic laser welding technology, the welds are beautiful and the welding deformation is small. It is suitable for the welding of products with high requirements on welding appearance and deformation
- The combination method can be divided into ground type or upside down type manipulator. According to different product requirements, optional swing welding heads, imported/domestic generators with different core diameters, and coaxial/side-blown protective gas are optional
- Laser welding speed can reach 2000mm~3000mm/min, the welding speed is 3~4 times that of arc welding, and the production efficiency is high
- Built-in laser welding process expert library, select welding process according to different types of gas boxes to reduce auxiliary time
- Optional movable floor rails, positioners and tooling fixtures to meet product welding and clamping needs
- Equipped with a welding room and dust removal system to meet Anren's production and environmental impact assessment requirements
- Equipped with a video surveillance display system to facilitate monitoring of the entire welding process
- Personalized customized host computer system that can be interconnected with the customer's MES production management system



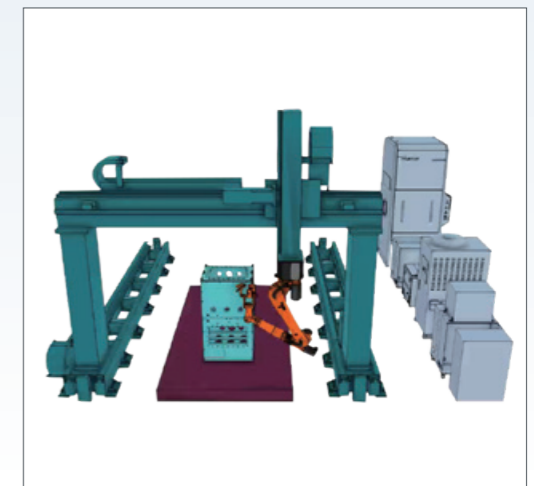
地面式机械手+旋转变位机  
Ground type manipulator + rotary positioner



地面式机械手+移动地轨+旋转变位机  
Ground manipulator + mobile ground rail + rotary positioner



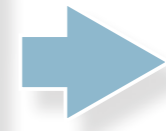
倒挂式机械手+移动地轨  
Upside-down manipulator + mobile ground rail



KMC联动机械手+地轨  
KMC linkage manipulator + ground rail

**自动化+**  
Automation  
System+

**FMC系列** 激光切割单元  
FMC Series Laser cutting cell



**AMS系列** 激光切割柔性系统  
AMS Series Laser cutting flexible system

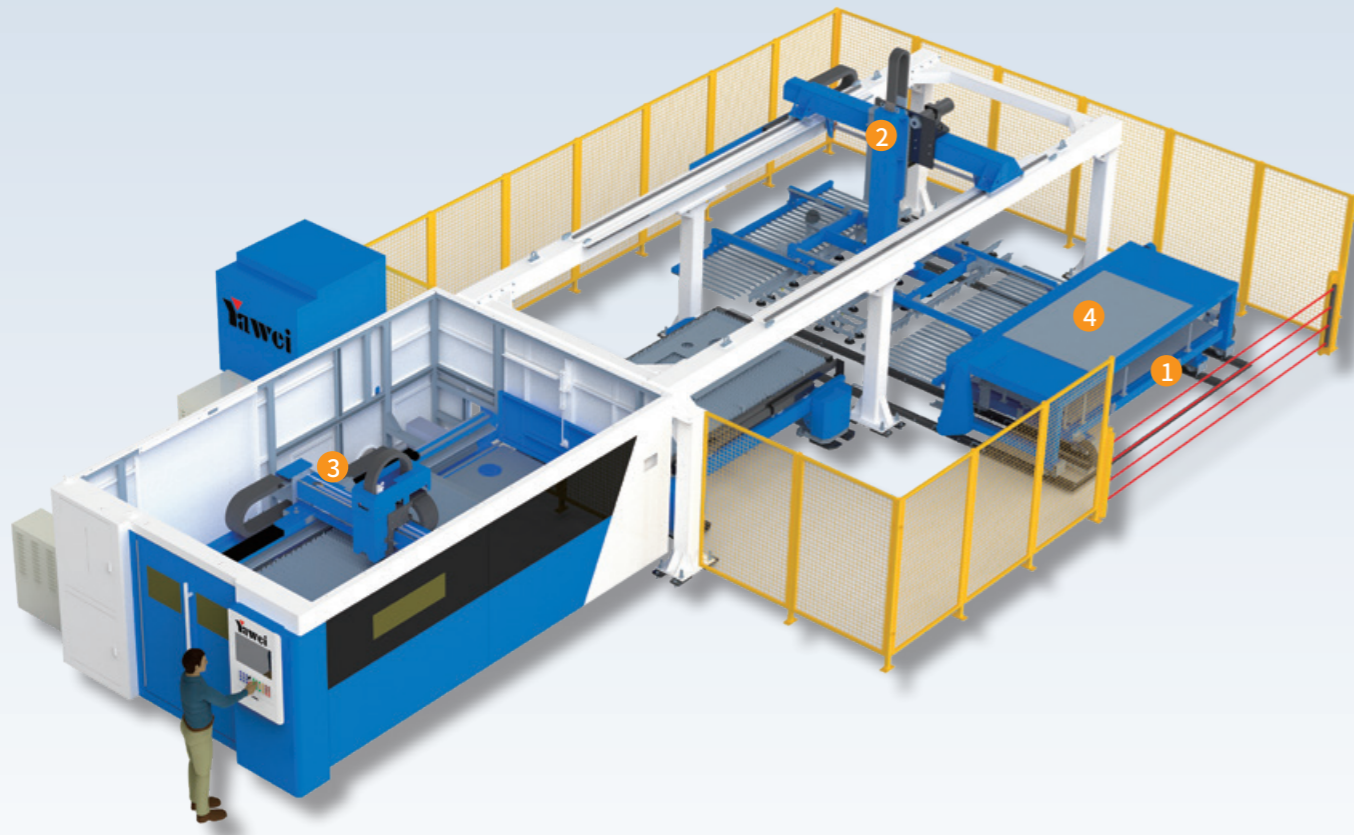


## FMC激光切割单元

### Laser Cutting Unit FMC

亚威提供的激光切割自动化系统，可以作为智能钣金工厂的设备单元，与生产管理中心ERP/MES进行实时通讯和数据共享，按生产计划进行无人化加工

Yawei laser cutting automation system can be served as the unit of smart factory. Can be linked to the central control ERP/MES system to realize the real-time communication and data sharing, and processing under product plans without man



- 自动完成板材的上料、切割和下料，实现单一规格板材的批量连续加工，显著提升了加工效率，降低了综合生产成本
- Automatically complete the loading, cutting and unloading of the plates, realizing the batch continuous processing of the plates of a single specification, significantly improving the processing efficiency and reducing the comprehensive production cost

- |           |                         |
|-----------|-------------------------|
| ① 原料台车    | ① Raw material cart     |
| ② 自动上下料装置 | ② Automatic LUL device  |
| ③ 激光切割机   | ③ Laser cutting machine |
| ④ 成品台车    | ④ Finished product cart |

## AMS激光切割柔性系统

### Laser Cutting Flexible System AMS

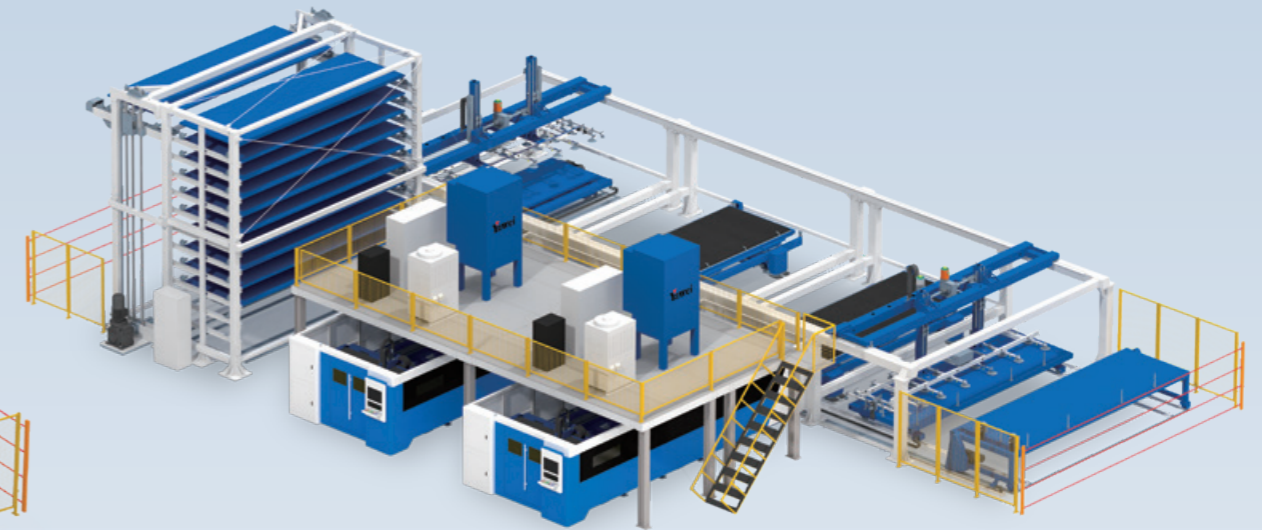
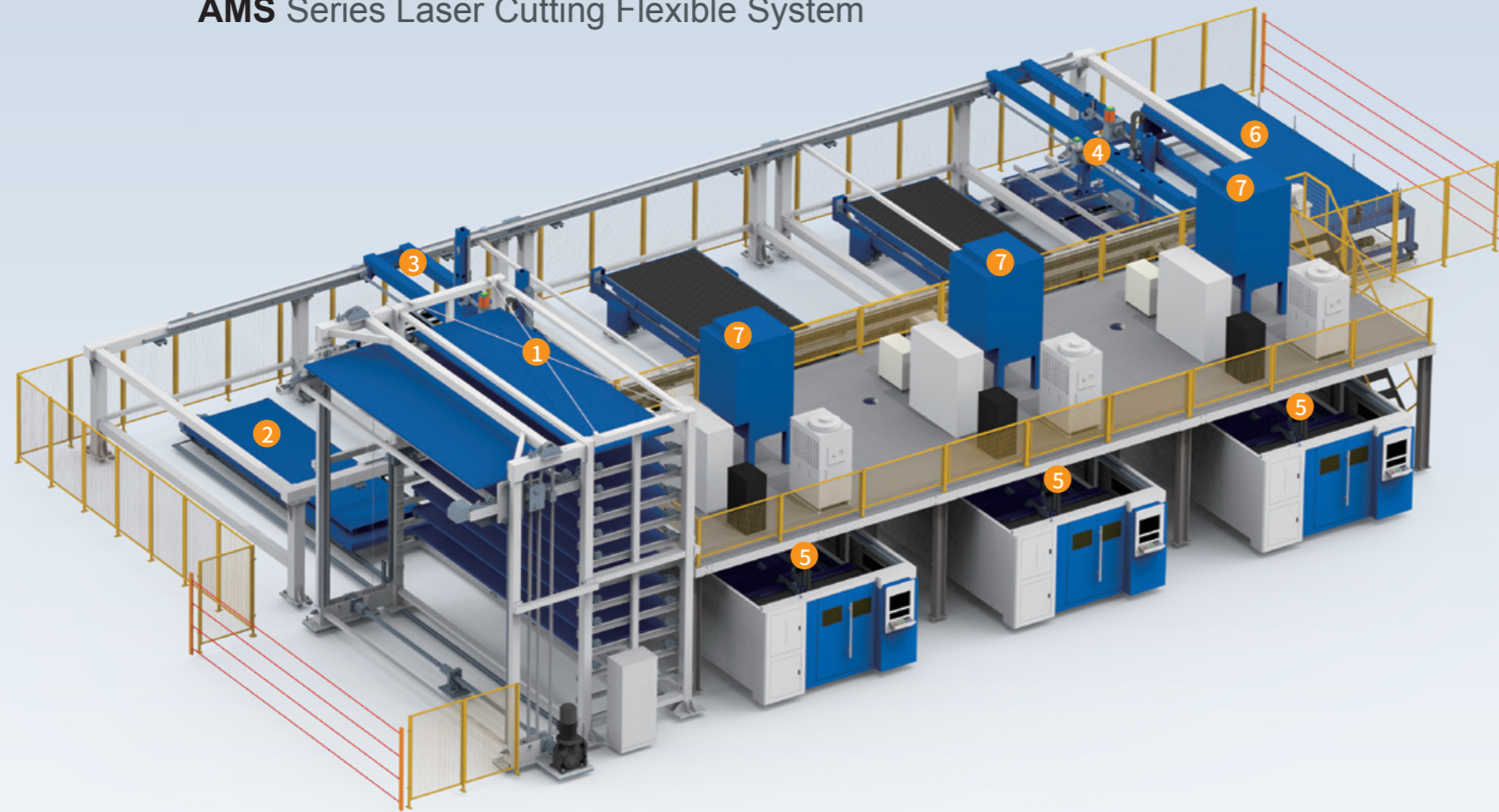


- 在上述FMC基础上增加多层料库系统，可进行多品种多规格板材的批量加工，并与生产管理系统实现通讯和数据共享
- 可根据需要选配工件分拣系统
- On the basis of the above FMC system, a multi-layers material library system can be added, which can be used for batch processing of plates of various varieties and specifications, and can realize communication and data sharing with the production management system
- The workpiece sorting system can be selected according to the needs

- |           |                                |
|-----------|--------------------------------|
| ① 多层料库    | ① Multi-shelves storage system |
| ② 原料台车    | ② Raw material cart            |
| ③ 自动上下料装置 | ③ Automatic LUL device         |
| ④ 激光切割机   | ④ Laser cutting machine        |
| ⑤ 成品台车    | ⑤ Finished product cart        |
| ⑥ 工件分拣系统  | ⑥ Sorting system               |

# AMS系列 激光切割柔性系统

## AMS Series Laser Cutting Flexible System



- |          |                                |
|----------|--------------------------------|
| ① 多层料库   | ① Multi-shelves storage system |
| ② 原料台车   | ② Raw material cart            |
| ③ 自动上料装置 | ③ Automatic loading device     |
| ④ 自动下料装置 | ④ Automatic unloading device   |
| ⑤ 激光切割机  | ⑤ Laser cutting machine        |
| ⑥ 成品台车   | ⑥ Finished product cart        |
| ⑦ 辅机置顶   | ⑦ Top set for auxiliary parts  |



由多层料库系统、多台激光切割主机、自动上/下料系统组成。大大提高了劳动生产效率和钣金工厂的自动化水平，促进制造业转型升级

The multi-shelves material storage system, laser cutting machines and automatic loading/unloading device. It can improve production efficiency and automation level of the sheet metal factory, and contribute to transformation and upgrading of the manufacturing industry

# 强大的加工及检测设备

POWERFUL PROCESSING AND TESTING EQUIPMENT

## 核心部件机加 / Core components machining



核心部件均由德国进口DMG、日本Mazak五轴加工中心一次成型，成品精度高、稳定性好。

The core components are all formed by DMG imported from Germany and MAZAK five-axis machining center in Japan. The finished products have high precision and good stability.

## 床身机加 / Machine bed machining



床身采用整体焊接卧式结构，退火消除内应力后进行精密加工，大大提高机床稳定性，同时结构刚性好，满足快速定位要求。

The bed adopts integral welded horizontal structure, precision machining is carried out after annealing to eliminate the internal stress, which greatly improves the stability of the machine tool, and the structure rigidity is good to meet the requirements of rapid positioning.

## 零部件加工 / Parts processing



先进的进口加工设备300余台套，以高精尖加工母机保证各零部件的精密加工。

More than 300 sets of advanced imported processing equipment, to ensure the precise processing of the parts and components with high precision processing machine.

## 精密检测 / Precision measure



拥有各类精密检测仪器30多台套，以“持续改进，力求完美、追求客户满意”为方针的质量管理体系，使公司的质量管理工作在各方面日趋完美。

With more than 30 sets of all kinds of precision testing instruments, the quality management system with the policy of "continuous improvement, striving for perfection, and the pursuit of customer's satisfaction" makes the quality management work of the company perfect day by day in all aspects.

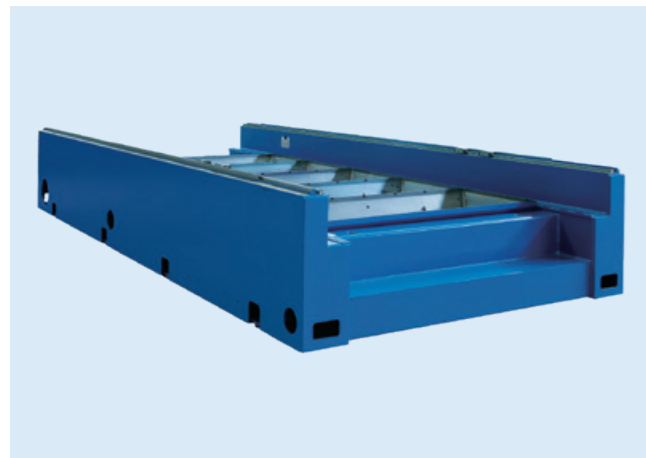


## 优质部件

HIGH QUALITY COMPONENTS

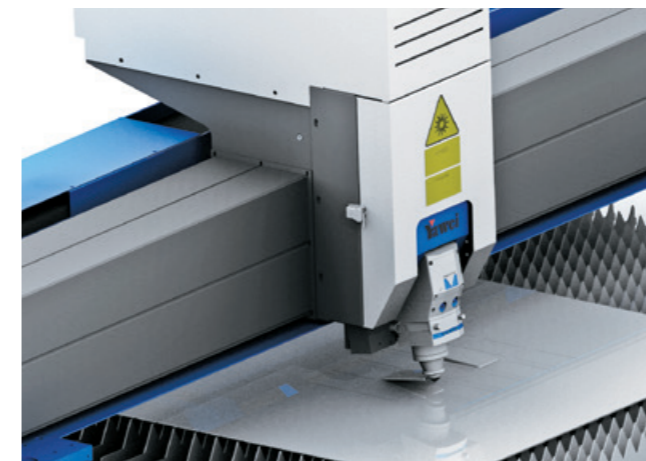
## 先进技术

ADVANCED TECHNOLOGIES



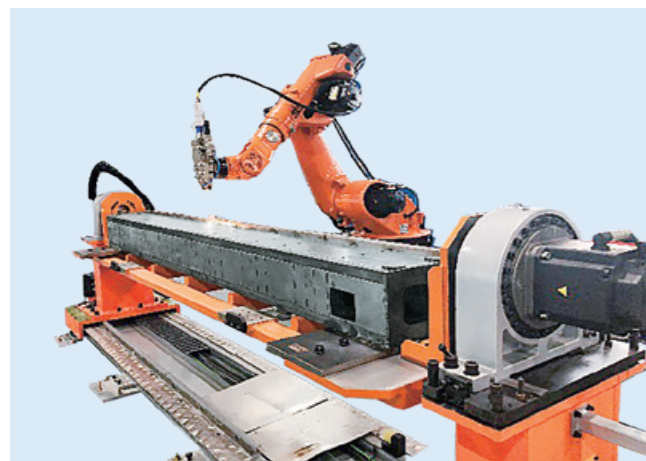
### 床身 / Basement

- 钢结构焊接，整体退火消除内应力，刚性好，稳定不变形
- 进口大型数控设备加工，实现超越设计标准的精度
- 抗高热强化设计，超高功率切割游刃有余
- Steel welded basement adopts annealing to relieve stress, reduces deformation and ensures good rigidity and stability
- The basement is processed by imported large-scale CNC equipment to achieve the precision beyond design standard
- Enhanced design for anti-heat design, easily capable of high power cutting



### 切割头碰撞保护 / Cutting Head Collision Protection

- 亚威专利，独有的切割头全方位保护技术
- 与翘起工件发生意外碰撞时，切割头部件自动脱离
- 可快速恢复切割状态，将影响降至最低
- YAWEI patent technology can provide full protection for cutting head
- Cutting head falls off automatically when accidentally collide with the tilted workpieces
- Cutting head can recover to the cutting state rapidly, and minimize the impact



### 横梁 / Beam

- 高刚性轻量化横梁具有更好的抗弯和抗扭能力，固有频率提升15%以上
- 经有限元分析优化的高刚性、轻量化设计，激光焊接加工
- 高速动态特性好，加速度快
- The high rigidity and lightweight beam has better bending and torsion resistance, and natural frequency is increased by more than 15%
- The lightweight design is optimized by FEA to ensure higher rigidity
- High speed dynamic characteristics, fast acceleration

材料	切割头	厚度	速度	功率	切割头	速度	功率
切割速度 (m/min)	3000	2000	2000	3000	1500	1500	1500
激光功率 (kW)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
气体类型	氮气	氮气	氮气	氮气	氮气	氮气	氮气
气体压力 (bar)	0.80	0.80	0.80	0.80	0.80	0.80	0.80
出气速度 (L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
切割深度 (mm)	1.0	1.0	0.7	1.0	1.0	1.0	1.0
切割精度 (mm)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
切割方式	连续	连续	连续	连续	连续	连续	连续
切割速度	2000	1500	1500	2000	1500	1500	1500
切割精度	0.05	0.05	0.05	0.05	0.05	0.05	0.05
切割头	2000	1500	1500	2000	1500	1500	1500
切割位置	0.05	0.05	0.05	0.05	0.05	0.05	0.05
切割方式	连续	连续	连续	连续	连续	连续	连续
切割速度 (m/min)	0	0	0	0	0	0	0
激光功率 (kW)	0	0	0	0	0	0	0
气体压力 (bar)	0	0	0	0	0	0	0
出气速度 (L)	0	0	0	0	0	0	0
切割深度 (mm)	0	0	0	0	0	0	0
切割精度 (mm)	0	0	0	0	0	0	0

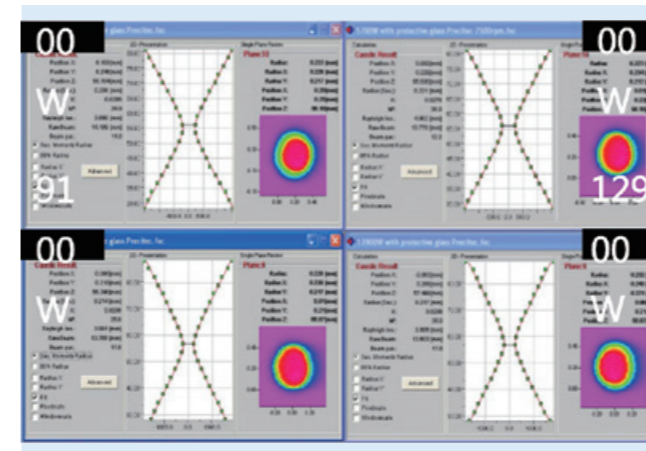
### 高功率切割工艺 / Cutting Craft of High Power

- 创新雷暴中厚板秒穿工艺，穿孔质量好，加工效率大幅提升
- 低气压高效切割、激光功率自动优化，使用成本显著降低
- 满功率亮面、铝合金无毛刺新型切割工艺，极大改善断面质量
- The creative "thunder piercing" process for moderate and thick sheet with superfast speed, good piercing quality greatly rise up the processing efficiency
- Efficient cutting with low gas pressure, automatic power optimization, reduce the running cost greatly
- Shinning kerf by full power cutting, new cutting process for aluminum alloy without scrapes, greatly improve the kerf quality



### 传动部件 / Transmission Parts

- 国际一流品牌
- 高强度、低噪音、寿命长
- 定位精度高，同步性能好
- International first-class brand from Germany/Japan
- High strength, low noise, long lifetime
- High positioning accuracy and perfect synchronization performance



### 焦点实时补偿功能 Focus Real-Time Compensation Function

- 实时捕捉焦点位置，自动计算偏移量
- 焦点自动补偿，提升中厚板切割稳定性
- 原装进口数控系统，全方位保驾护航
- Capture the focus position in real time and calculate the offset automatically
- Focus automatic compensation, improve the cutting stability of thick plate
- Original imported numerical control system, all-round escort



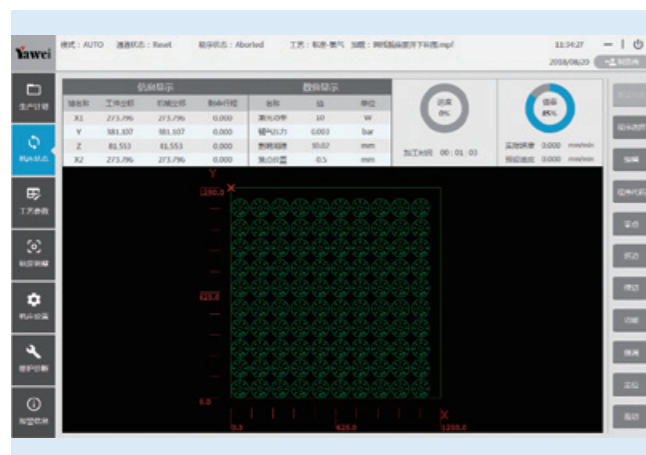
### 智能保养提醒 / Intelligent Maintenance Reminder

- 开启与关闭智能化保养提示功能
- 查看使用时间进度，了解机床保养工作
- 方便用户机床保养延长机床使用寿命
- 根据不同的保养项目设置不同的保养等级，方便客户维护设备
- Turn on and off intelligent maintenance prompt function
- Check the use time schedule to understand the maintenance of machine tools
- Convenient user machine tool maintenance to extend the service life of machine tools
- According to different maintenance items, different maintenance levels are set to facilitate customer maintenance of equipment



### 生产计划列表 / Production Plan List

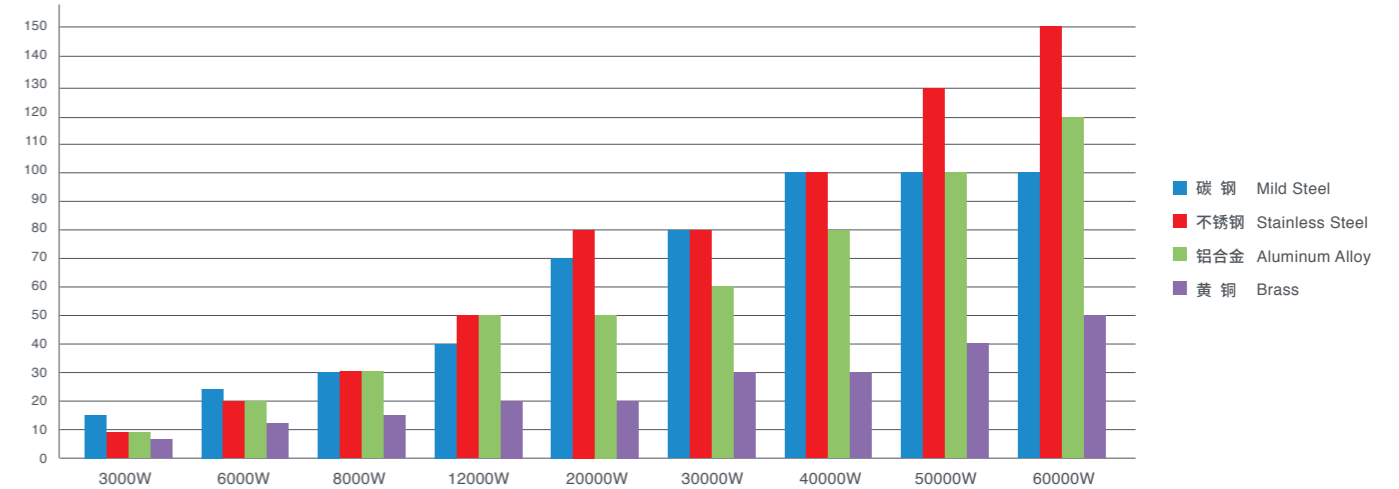
- 全新的计划列表功能，能便捷的插单和调整加工计划
- 加工数量、加工时间等信息一目了然
- 可自主设置不同工件的启动方式
- New plan list function, easily lead in and adjust the production plans
- Information, like quantity and time of production and so on, is clearly shown on the interface
- Operator can setup start mode of different workpieces autonomously



### 数字化的HMI控制平台 / Digital HMI Control Platform

- 全新生产计划功能，与工厂MES无缝对接
- 灵活进入，任意选择切割轮廓
- 慢速起刀功能，改善共边及拐角切割质量，提高稳定性
- New production planning function, seamless connection with factory MES
- Flexible entry, arbitrary choice of cutting profile
- Slow starting function, improve common edge and corner cutting quality, and improve stability

### 加工能力 / Process capability



- 加工能力表是特定条件下的测试数据
- 即使被加工物是同一规格的材料，也会因化学成份含量不同、加工形状不同等因素导致加工品质出现差异
- The process capacity chart shows the testing data under specific conditions
- Even if for the same material, the cutting quality may differ due to different chemical composition contents, and processing shapes, etc

- 板材表面打标 / Marking Function
- 黄铜 (电子、化工等) / Brass
- 铝合金板 (航空、专用车辆、幕墙等) / Aluminum Plate
- 碳钢薄板 (金属柜体、家用电器、农业机械等) / Thin Plate of Mild Steel
- 不锈钢薄板 (电梯、厨卫用品等) / Thin Plate of Stainless Steel
- 碳钢中厚板 (工程机械、轨道交通、船舶工业等) / Moderate Thickness Plate of Mild Steel
- 不锈钢中厚板 (电力、锅炉、食品机械等) / Moderate Thickness Plate of Stainless Steel
- 管材 (健身器材、医疗机械、建筑等) / Tubes

钣金行业MES生产管理系统，是一套面向制造企业车间管理层的信息化管理系统，实现生产订单的高效流转、透明化跟踪、设备和板材的高效利用，为钣金行业提供一站式数字化制造解决方案。

Sheet metal industry MES production management system, is a set of information management system for the workshop management of manufacturing enterprises, to achieve efficient flow of production orders, transparent tracking, efficient use of equipment and plate, to provide one-stop digital manufacturing solutions for the sheet metal industry.



设备生产加工实时监控

Real-time monitoring of equipment production and processing

- 手机APP一键扫码开工、报工、质检、异常提报等
- 手机查询订单进度，产量统计，设备绩效报表及能耗等管理
- Mobile APP can start code scanning with one click, report work, quality inspection, report abnormality, etc
- Inquiry of order progress, production statistics, equipment performance report and energy consumption management by mobile phone



APP扫码下料、开工、质检  
Mobile APP



扫码报工  
Scan code



订单进度、生产统计  
Order progress, production statistics



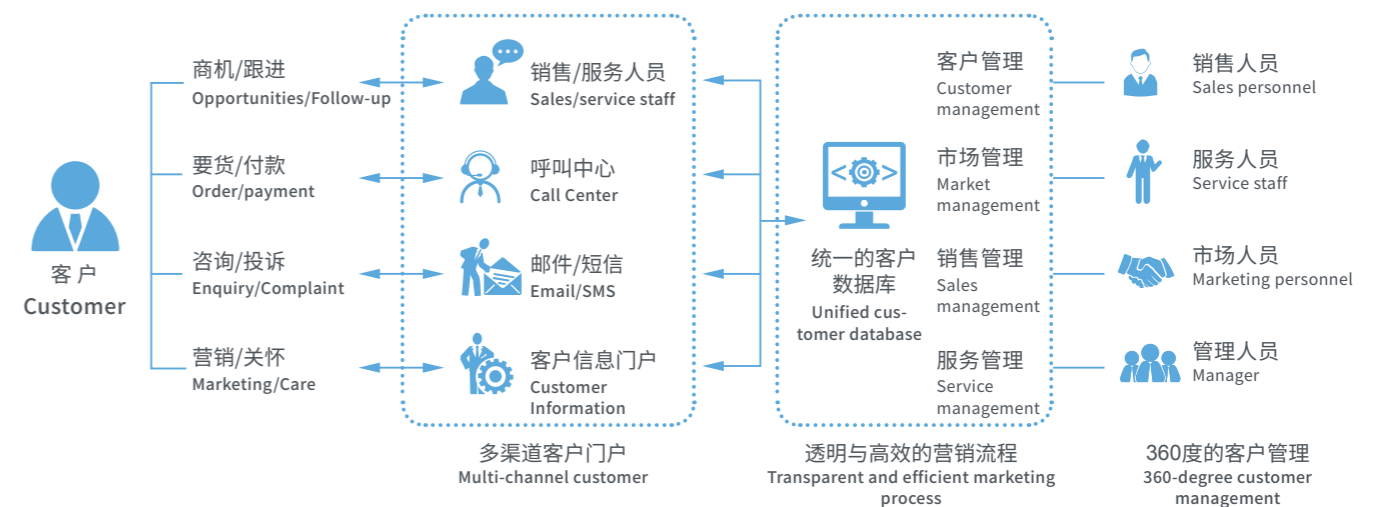
设备异常在线保修  
Online service

### 完善的销售网络和服务体系

在国内建有60多个集销售、服务于一体的办事处，在国外60多个国家建有销售代理机构

### Perfect sales network and service system

The company has more than 60 sales and service offices in China and sales agents in more than 60 foreign countries



为服务好三万多家客户，搭建了完善的客户服务保障体系，提供多样的产品方案和快速的技术服务，确保良好体验。

To serve more than 30,000 customers, the company has set up a sound customer service guarantee system, providing a variety of product solutions and rapid technical services to ensure a good experience.



# 江苏亚威机床股份有限公司

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