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菲速激光 焊接专家

Feisu Laser Welding Expert

宁波菲速激光科技有限公司

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FEISU LASER

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质量第一 · 信用第一 · 用户至上 · 真诚服务

Quality first, credit first, customer first, sincere service

专注激光焊接设备 让焊接变的更简单

Focused on laser welding equipment to make welding easier

菲速激光 FEISU LASER

菲速激光科技有限公司，是一家专业致力于研发、生产和销售工业激光焊接设备的知名制造商。

在企业迅速发展过程中，菲速激光坚持以求实创新、科技领先为理念，努力为客户提供具有高性能高质量的产品与服务，从而在用户与合作伙伴心中建立起良好的企业形象。菲速激光不断发展自身的研发实力，以德国的品牌激光企业为技术支撑，以国际知名激光器件供应商为零部件配套平台，聚集了一大批常年从事激光设备开发，生产的光、机、电、IT高水平人才，团结合作，不断创新，为国内外广大的工业激光用户提供全面的激光焊接应用解决方案及相关的配套设备。

设备广泛应用于卫浴器材、汽车零部件、五金工具、电子元器件、机械、仪器仪表、医疗器械、通讯部件、光通讯器件、教育科研、工艺礼品等领域。

经过菲速人多年的耕耘，目前公司开发的产品在国内已经具有较高的市场占有率及品牌知名度，同时也建立起一个覆盖全国的销售及客户服务网络。相信菲速的未来必将能够为我们的客户提供更多更优质的产品与服务。

激光焊接设备专业制造商
Laser Welding Equipment Professional Manufacturer

Feisu Laser Technology Co., Ltd. is a renowned manufacturer specializing in the research, development, production, and sales of industrial laser welding equipment.

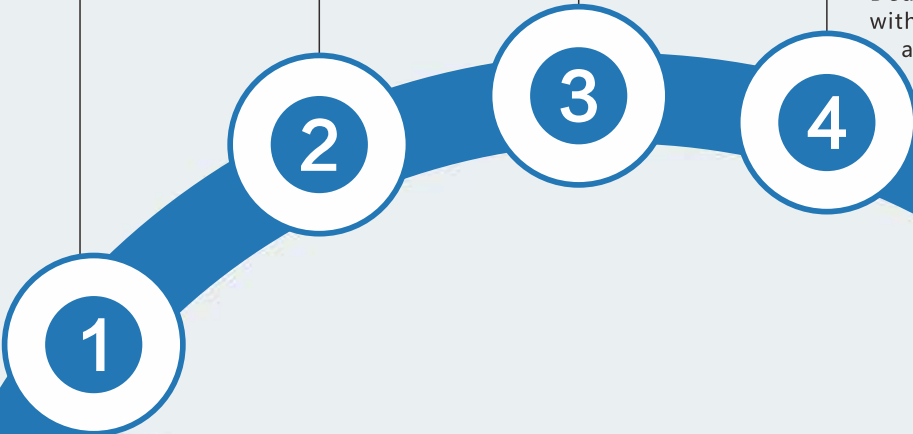
During the rapid development of the company, Feisu Laser adheres to the philosophy of practical innovation and technological leadership. The company strives to provide customers with high-performance, high-quality products, and services, aiming to establish a favorable corporate image in the hearts of users and partners. Feisu Laser continually enhances its research and development capabilities, relying on German brand laser companies for technical support and international renowned laser device suppliers for component support platforms. The company has gathered a large number of highly skilled professionals specializing in optics, mechanics, electronics, and IT, who have been dedicated to the development and production of laser equipment for many years. Through unity, cooperation, and continuous innovation, Feisu Laser aims to provide comprehensive laser welding application solutions and related supporting equipment for industrial laser users both domestically and internationally.

The equipment is widely applied in various fields including sanitary ware, automotive components, hardware tools, electronic components, machinery, instruments, medical equipment, communication components, optical communication devices, education and research, craft gifts, and more.

After years of dedicated efforts by Feisu, the products developed by the company currently enjoy a high market share and brand recognition domestically. Simultaneously, a nationwide sales and customer service network has been established. We believe that in the future, Feisu will continue to provide our customers with even more high-quality products and services.

我们的优势与使命 Our Advantages and Mission:

- 丰富的激光设备行业经验
Extensive experience in the laser equipment industry
- 过硬的产品质量
Exceptional product quality
- 完善的售后服务体制
Comprehensive after-sales service system
- 为全球客户提供更加稳定、环保、节能的激光应用解决方案与优质的服务而奋斗。
Dedicated to providing global customers with more stable, environmentally friendly, and energy-efficient laser application solutions and high-quality services



FEISU LASER
菲速激光 焊接专家



Index 产品目录

- 01 连续光纤激光焊接机
Continuous Fiber Laser Welding Machine
- 02 焊接实例
Welding Examples
- 03 CCD视觉拍照焊接系统/
多轴激光焊接工作台
CCD Vision Photography Welding System Multi-axis Laser Welding Workbench
- 04 工作台类型
Workbench Types
- 04 标准焊接夹具
Standard Welding Fixtures
- 05 YAG脉冲光纤激光焊接机
YAG Pulse Fiber Laser Welding Machine
- 07 机器人激光焊接机
Robot Laser Welding Machine
- 08 手持激光焊接机
Handheld Laser Welding Machine

连续光纤激光焊接机/选配激光自动加丝系统

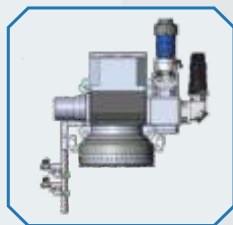
Continuous Fiber Laser Welding Machine / Optional Laser Automatic Wire Feeding System

1000W-6000W(适用于深熔焊接，中厚板穿透焊接)
1000W-6000W (Suitable for deep fusion welding, medium-thick penetration welding)

(可根据客户需求定制工作台大小、行程长短、工位数量、最大支持八轴四工位)
Customizable workbench size, travel length, number of workstations, supporting up to eight axes and four workstations according to customer requirements



焊接加丝系统
Welding Wire Feeding System



振镜焊接系统
Galvanometric Welding System



主要特点

- 1.由于光纤激光器的谐振腔内无光学镜片，具有免调节、免维护、高稳定性的优点，超过10万小时的泵浦源寿命，这是传统激光器无法比拟的。
- 2.高的电光效率：电光转换效率高达25%大幅度节约工作时的耗电，节约运行成本。
- 3.X、Y、Z三轴平移台、行程800、300、400nm。
- 4.配合旋转轴A，实现多轴联动。
- 5.应用于各种元器件的平面、三维焊接需求，适用于各种产品点焊接连续焊接。
- 6.菲速激光焊接专用软件、手轮控制。

Main features

1. Due to the absence of optical lenses in the resonant cavity of the fiber laser, it has the advantages of no adjustment, no maintenance, and high stability, with a pump source lifespan exceeding 100,000 hours, which is unmatched by traditional lasers.
2. High electro-optical efficiency: The electro-optical conversion efficiency is as high as 25%, significantly saving power consumption during operation and reducing operating costs.
3. X, Y, Z three-axis translation stage with a travel of 800, 300, 400nm.
4. Coordinated with the rotation axis A, achieving multi-axis linkage.
5. Applied to the flat and three-dimensional welding requirements of various components, suitable for spot welding and continuous welding of various products.
6. Feisu laser welding dedicated software, handwheel control.

技术参数 / Technical Parameters

	FS1000	FS2000	FS3000
最大激光功率 Maximum Laser Power	1000W	2000W	3000W
激光工作介质 Laser Working Medium	掺稀土光纤 Rare Earth-Doped Fiber	掺稀土光纤 Rare Earth-Doped Fiber	掺稀土光纤 Rare Earth-Doped Fiber
激光波长 Laser Wavelength	1070nm ± 10nm	1070nm ± 10nm	1070nm ± 10nm
脉冲宽度 Pulse Width	连续出光 Continuous Emission	连续出光	连续出光
光纤输出数量 Number of Fiber Outputs	1路 1 Channel	1路	1路
焊接深度 Welding Depth	最大3mm/不锈钢 Maximum 3mm / Stainless Steel 最大2mm/铝合金 Maximum 2mm / Aluminum Alloy	最大4.5mm/不锈钢 Maximum 4.5mm / Stainless Steel 最大3mm/铝合金 Maximum 3mm / Aluminum Alloy	最大6mm/不锈钢 Maximum 6mm / Stainless Steel 最大5mm/铝合金 Maximum 5mm / Aluminum Alloy
整机功率 Overall Machine Power	< 4.8KW	< 10KW	< 15KW
瞄准定位 Aim and Positioning	红光 (可选配CCD) Red Light (Optional with CCD)	红光 (可选配CCD) Red Light (Optional with CCD)	红光 (可选配CCD) Red Light (Optional with CCD)
电源输入 Power Input	400V ± 10% / 3P+PE	400V ± 10% / 3P+PE	400V ± 10% / 3P+PE
主机尺寸 (mm) Host Size (mm)	183H*470W*850D	1050H*600W*1400D	1050H*600W*1400D
冷却方式 Cooling Method	水冷 Water Cooling	水冷	水冷
光纤型号 Fiber Model	QBH	QBH	QBH
光纤直径 Fiber Diameter	50um	100um	100um
光纤长度 Fiber Length	10m	10m	10m

焊接实例 / Welding example

压力变送器/传感器 Pressure Transmitter/Sensor



差压变送器
Differential Pressure Transmitter



压力变送器
Pressure Transmitter

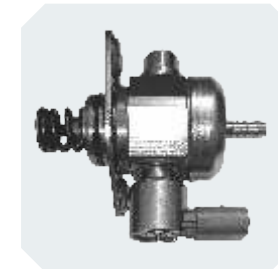


变送器膜片
Transmitter Diaphragm



气压、水压、油压变送器
Air Pressure, Water Pressure, Oil Pressure Transmitter

汽车配件 Automotive Parts



汽车高压油泵
High-Pressure Fuel Pump



发动机VVT
Variable Valve Timing for Engine



轨压传感器/喷油嘴
Rail Pressure Sensor / Fuel Injector



电磁阀先导头,铁芯
Solenoid Valve Pilot Head, Iron Core

气动配件 Pneumatic Parts

称重传感器 Weighing Sensor



称重传感器
Weighing Sensor



称重传感器
Weighing Sensor

水泵配件 Water Pump Parts



水泵叶轮
Water Pump Impeller



水泵泵头壳体
Water Pump Head Casing

厨卫配件 Kitchen and Bathroom Parts



水龙头
Faucet



卫浴下水
Bathroom Drain

电机配件 Motor Parts



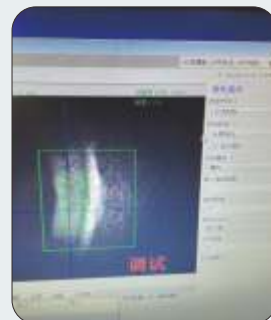
电机定子
Motor Stator



电机转子
Motor Rotor

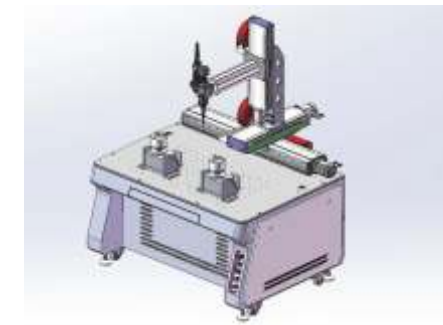
CCD视觉拍照焊接系统/多轴激光焊接工作台

CCD Vision Photography Welding System / Multi-Axis Laser Welding Workbench

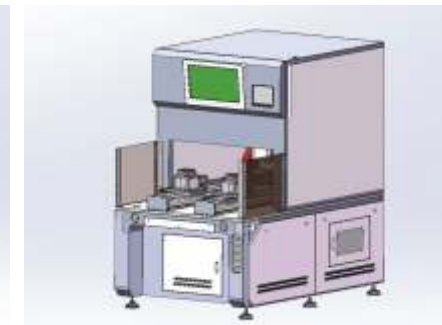


工作台类型

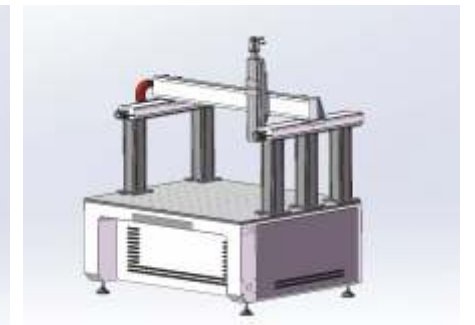
Workbench Types



多轴工作台
Multi-Axis Workbench



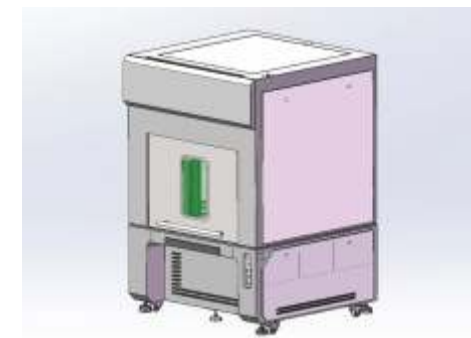
定制工作台
Customized Workbench



龙门架工作台
Gantry Workbench



半包围工作台
Semi-Enclosed Workbench



全包围工作台
Fully Enclosed Workbench

标准焊接夹具

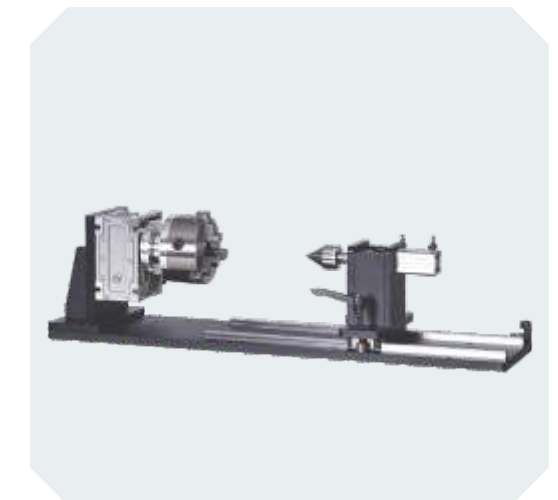
Standard Welding Fixtures



上下顶尖夹具
Top and Bottom Taper Fixtures



龙门架顶尖夹具
Gantry Top Taper Fixtures



左右顶尖夹具
Left and Right Top Taper Fixtures

主要特点 /Main features

本系统采用CCD摄像机作为焊缝检测的传感器，用来抓取实时焊接中待焊接区域的焊缝图像，并引入计算机处理技术和机器视觉技术，通过图像采集卡，把CCD摄像机采集到的实时图像缓冲送入微机内存中，进行图像处理运算。然后将软件处理后所得到的焊缝信息送入运动控制卡中，进而控制执行机构进行相关焊接运动，最终达到焊接自动化的目的。

This system employs a CCD camera as the sensor for welding seam detection. It is used to capture real-time images of the welding area during the welding process. The system integrates computer processing technology and machine vision techniques. Through an image acquisition card, the real-time images captured by the CCD camera are buffered into the computer's memory for image processing operations. The software processes the obtained welding seam information and sends it to the motion control card. This, in turn, controls the actuator to perform the necessary welding movements, ultimately achieving the goal of welding automation.

YAG脉冲光纤激光焊接机/QCW脉冲激光焊接机

YAG Pulse Fiber Laser Welding Machine / QCW Pulse Laser Welding Machine

25W-600W



主要特点

1. 激光焊接是一种新型的焊接方式，激光焊接主要针对薄壁材料、精密零件的焊接，可实现点焊、对接焊、叠加焊、密封焊等。
2. 焊缝宽度小，热影响区小、变形小、焊接速度快。
3. 焊缝平整、美观、焊后无需处理或只需要简单处理工序。
4. 可控制，聚焦光点小，可高精度定位，可实现自动化。
5. 可实现不同的两种材料间的焊接。
6. 焊缝质量高，无气孔，可减少和优化母材杂质，组织焊后可细化，焊缝强度、韧性至少相当于甚至超过母材金属。

Main features

1. Laser welding is a novel welding method primarily used for thin-walled materials and precision components, enabling spot welding, butt welding, overlay welding, and sealed welding.
2. The weld bead is narrow, with a small heat-affected zone, minimal deformation, and fast welding speed.
3. The weld bead is smooth and aesthetically pleasing, requiring no post-weld treatment or only simple processing procedures.
4. It is controllable, with a small focused laser spot, high precision positioning, and the capability for automation.
5. It can achieve welding between different types of materials.
6. The weld quality is high, free from pores, reducing and optimizing impurities in the base material. The post-weld structure can be refined, and the weld strength and toughness are at least comparable to, or even exceed, the base metal.

技术参数 / Technical Parameters

	FW150/FS150A	FW300/FS300A	FW500/FS500A
激光类型 Laser Type	YAG	YAG	YAG
激光波长 Laser Wavelength	1064nm	1064nm	1064nm
最大激光输出功率 Maximum Laser Output Power	150W	300W	500W
最大激光脉冲能量 Maximum Laser Pulse Energy	40J	70J	90J
脉冲宽度 Pulse Width	0.1-20ms	0.1-20ms	0.1-20ms
脉冲频率 Pulse Frequency	1-100HZ	1-100HZ	1-200HZ
光纤输出数量 Number of Fiber Outputs	最多4路 Up to 4 Channels	最多4路 Up to 4 Channels	最多4路 Up to 4 Channels
分光方式 Beam Splitting Method	能量分光或时间分光 Energy Splitting or Time Splitting	能量分光或时间分光 Energy Splitting or Time Splitting	能量分光或时间分光 Energy Splitting or Time Splitting
光纤芯径 Fiber Core Diameter	0.4mm	0.6mm	0.6mm
反馈控制方式 Feedback Control Method	能量反馈/电流反馈 Energy Feedback/Current Feedback	能量反馈/电流反馈 Energy Feedback/Current Feedback	能量反馈/电流反馈 Energy Feedback/Current Feedback
能量稳定性 Energy Stability	< ±2%	< ±2%	< ±2%
定位方式 Positioning Method	红光指示 (CCD选配) Red Light Indicator-Optional with CCD	红光指示 (CCD选配) Red Light Indicator-Optional with CCD	红光指示 (CCD选配) Red Light Indicator-Optional with CCD
冷却方式 Cooling Method	内置水冷加外部冷水机 Built-in Water Cooling with External Chiller	内置水冷加外部冷水机 Built-in Water Cooling with External Chiller	内置水冷加外部冷水机 Built-in Water Cooling with External Chiller
电力需求 Power Requirements	380V ± 10%/50Hz/30A	380V ± 10%/50Hz/40A	380V ± 10%/50Hz/60A

工程实例 / Engineering example



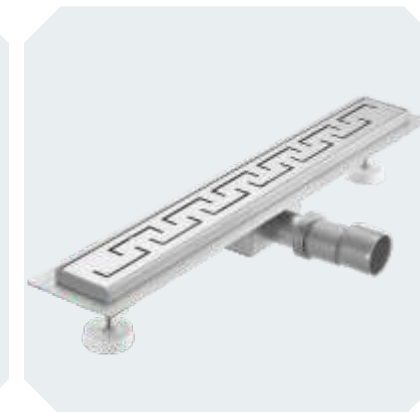
焊接实例 / Welding example



油烟机
Range Hood



集成灶
Integrated Stove



长地漏
Long Floor Drain



淋浴屏
Shower Screen



汽车发动机喷油嘴
Automobile Engine Fuel Injector



毛巾架
Towel Rack

机器人激光焊接机

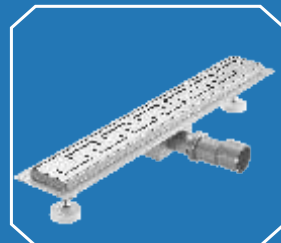
(选配激光加丝焊接系统)
Robot Laser Welding Machine
(Optional Laser Wire Feeding Welding System)



油烟机 Range Hood



集成灶 Integrated Stove



长地漏 Long Floor Drain

主要特点

六轴联动，可完成空间任意轨迹；机械手与光纤传输激光焊接机完美结合、可满足各种自动化生产的需要，广泛应用于厨具、卫浴、门把手及精密零部件、五金制品的自动化焊接。

Main features

Six-axis linkage, capable of following any spatial trajectory; the robotic arm is perfectly integrated with the fiber transmission laser welding machine, meeting the requirements of various automated production processes. Widely used in the automated welding of kitchenware, bathroom fixtures, doorknobs, precision components, and hardware products.

手持激光焊接机

(可配自动加丝功能)
Handheld Laser Welding Machine
(Optional Automatic Wire Feeding Function)



手持焊接头
Handheld Welding Head



加丝机
Wire Feeder

主要特点

- 1.免调节，能耗低，无耗材，长期使用可为用户节省大量加工成本；
- 2.体积小结构紧凑，内置水冷，手持焊接灵活方便，可以实现户外焊接；
- 3.配备10米光纤，可以对各种复杂焊缝的工件、较大工作非规则形状，实现任意角度的焊接；
- 4.光纤传输的光束质量更好，焊点更均匀，熔深更好；特别适用于氩弧焊无法焊接的超薄焊接有良好的焊接效果；
- 5.操作简单易学上手快，无需老师傅；

Main features

1. No adjustment, low energy consumption, no consumables, long-term use can save users a significant amount of processing costs.
2. Compact and small in size, with a built-in water cooling system. The handheld welding is flexible and convenient, suitable for outdoor welding.
3. Equipped with a 10-meter fiber optic cable, it can be used for welding various complex welds and large irregularly shaped workpieces, achieving welding at any angle.
4. The beam quality transmitted by the fiber is better, resulting in more even welds and better penetration. Particularly suitable for ultra-thin welding that cannot be welded by argon arc welding, with excellent welding effects.
5. Simple and easy-to-learn operation, no need for extensive training.

适用材料和应用范围

适用材料：主要适用于不锈钢、碳钢、合金钢、硅钢、弹簧钢、铝、铝合金、镀锌板、镀铝锌板等金属焊接。

应用范围：广泛应用于厨卫行业、家电行业、广告行业、模具行业、不锈钢门窗行业、工艺品行业、居家用品行业、家具行业、汽配行业等行业。

Applicable Materials:
Primarily suitable for welding metals such as stainless steel, carbon steel, alloy steel, silicon steel, spring steel, aluminum, aluminum alloy, galvanized sheet, and aluminum-zinc-coated sheet.
Application Range:
Widely used in industries such as the kitchen and bathroom industry, home appliance industry, advertising industry, mold industry, stainless steel door and window industry, handicraft industry, household goods industry, furniture industry, automotive parts industry, and other related sectors.



技术参数 /Technical Parameters

机器型号 Machine Model	FS-1000W	FS-1500W	FS-2000W
激光功率 Laser Power	1000W	1500W	2000W
激光波长 Laser Wavelength	1070 ± 5nm	1070 ± 5nm	1070 ± 5nm
运行模式 Operating Mode	连续/调制 Continuous/Modulated	连续/调制 Continuous/Modulated	连续/调制 Continuous/Modulated
输出焊接头类型 Output Welding Head Type	手持摆动头 Handheld Swing Head	手持摆动头 Handheld Swing Head	手持摆动头 Handheld Swing Head
输出功率稳定度 Output Power Stability	<3%	<3%	<3%
功率调节范围 Power Adjustment Range	10-100%	10-100%	10-100%
焊接熔深 Welding Penetration Depth	0.5-2.5mm	0.5-3.5mm	0.5-3.5mm
冷却方式 Cooling Method	内置水冷 Built-in Water Cooling	内置水冷 Built-in Water Cooling	内置水冷 Built-in Water Cooling
光纤线长度 Fiber Optic Cable Length	标配10米 Standard 10 meters	标配10米 Standard 10 meters	标配10米 Standard 10 meters
吹气保护 Air Blowing Protection	氩气、氮气 Argon Gas, Ammonia Gas	氩气、氮气 Argon Gas, Ammonia Gas	氩气、氮气 Argon Gas, Ammonia Gas
电力需求 Power Requirements	AC220v/380v/50Hz	三相(Three-phase)AC380v/50Hz	三相(Three-phase)AC380v/50Hz
设备功率 Equipment Power	4.5Kw	5.5Kw	7.5Kw
占地面积 Footprint	1*1.6m	1*1.6m	1*1.6m
整机重量 Total Weight	200Kg	200Kg	200Kg
工作温度 Operating Temperature	0-40℃	0-40℃	0-40℃
环境要求 Environmental Requirements	无振动、无干扰源、保持通风 No vibration, no interference sources, maintain ventilation		