



中国昊宇 服务世界  
Haoyu in China provides welding solutions for the whole world

  
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# HAOYU

## SMART INTEGRATED WELDING SOLUTIONS

### 智慧焊接 整体解决方案





When it comes to welding solutions, we always look for the next level of excellence.

我们不断前行，寻找更完美的焊接方案。



我们  
—产品理念

## PRODUCT IDEAS

专注于焊接设备。我们的产品是与客户交互的桥梁，通过产品不断创新，品质不断提升，操作不断优化，以及全程优质服务，给客户放心的体验，使客户在使用过程中无后顾之忧。

Focus on welding equipment. Our products serve as a bridge for interaction with customers. Through continuous product innovation, quality improvement, and easier operation, we provide customers with a reassuring experience through high-quality and thoughtful service throughout the entire process, ensuring that they have no worries during using our products.

 **创新设计**  
Innovative design

以实用性的理念设计产品，兼顾产品的功能，美观，安全，稳定以及操作性。

We design products with a practical concept that considers function, good looking, safety, stability, and operability.

 **标准化生产**  
Standardized production

设备均在工厂标准化生产，各流程有序受控，确保产品质量达到“高精尖”要求。

All machines are produced in a standardized manner in the factory, with orderly and controlled processes to ensure product quality meets the requirements of "high-precision and cutting-edge".

 **精选材料**  
Selected materials

精选国际知名元器件，所有功能性配件材料均选用国际品牌，从细微处下功夫。

Select internationally renowned components, All functional accessory materials are selected from international brands, and efforts are made from smallest details.

 **一体化服务**  
Integrated services

售前、售中、售后全程立体化服务，关注细节，尽心尽力。

Pre-sales, in sales, and after-sales services are fully integrated. Every detail is cared with every effort.

# ABOUT US

## 昊宇简介

我们不仅是设备供应商，  
更是您理想的合作伙伴。

We don't just supply machines,  
we develop partnership.



### 20+

20多年耕耘，丰富的专业经验

More than 20 years of efforts in welding field  
accumulated rich professional experience

### 60+

60多项专利技术

More than 60 patented technologies

### 70+

出口70多个国家和地区

Exported to over 70 countries and regions

### 15000+

15000余平现代化厂房

More than 15000m<sup>2</sup> of modern workshop

### 创新 INNOVATION

技术创新是企业发展的灵魂，公司注重自主研发能力的积累与提升，不断总结经验和探索新的领域，技术精湛，为客户提供最佳的解决方案。

Technological innovation is the soul of enterprise development. We focus on accumulating and improving our independent R&D capabilities, constantly summarizing experience and exploring new fields. With exquisite technology, we provide customers with the best solutions.

### 品质 QUALITY

“精益生产，敏捷制造”，高质量满足市场需求。公司持续推进精品工程，实行质量管理全员化，全过程质量控制、溯源。

By "lean production, agile manufacturing", meet market demand with high quality. We continuously promote high-quality projects, require all staff to take part in quality management, to ensure quality control and traceability throughout the entire process.

### 服务 SERVICE

为客户创造更多价值，满意从解决问题开始，感动来自每个细节，公司坚持实施品牌战略，不断拓宽市场服务内涵，致力成为客户终身可信赖的合作伙伴。

We're trying our best to create more value for customers, making them satisfied and touched by every detail. We keep on implementing brand strategy, continuously expand the connotation of market services, and are committed to becoming a lifelong trusted partner for customers.

昊宇数控机械有限公司位于是一家集设计、生产、销售服务于一体的高新技术企业。自公司成立以来，一直致力于工厂生产过程的自动化，涉足领域涵盖汽车、工程机械、机车车辆、电力、造船、压力容器、石油、家用电器等行业。凭借雄厚的技术、严谨的生产加工、周到的售后服务，昊宇的产品正在为工业现代化贡献力量。公司主导产品有各种类型的自动焊接、多轴数控系统及焊接机器人系统等，满足不同用户的需求。技术的更新、产品的完善是公司的最大内涵，客户的满意、社会的认可是公司的最大外延。公司将始终秉承“技术立身，诚信为本”的原则和理念，成为客户售前、售中、售后支持的典范。

Haoyu CNC Machinery Co., Ltd. is a high-tech enterprise that integrates design, manufacture and after-sales service in one body. Since establishment, it has been committed in automation of factory production processes in the areas of automobiles, construction machinery, rolling stock, electric power, shipbuilding, pressure container, petroleum, house appliances, etc. Relying on solid technique strength, rigorous manufacture and meticulous after-sales service, its products are contributing to the industrial modernization. The main products include various types of automatic welding, multi-axis CNC systems and robot welding systems, meeting the demands of different users. Improvement of technique and perfection of products is the intension of Haoyu, while satisfaction of customers and social approval is its extension.

Haoyu CNC will always take the principle and ideal of "Gain fame and position with technology and take sincerity and reputation as the principle" to become the model of support for customers before-sales, during-sales and after-sales.

### 主要用户 MAIN USERS



# MANUFACTURE CAPABILITY

## 生产力

在自动焊接制造领域，  
我们卓尔不群。

In the field of automatic  
welding manufacturing,  
we stand out from the industry.

## 匠心生产 高质高效

**Producing high-quality and  
efficient machines by craftsmanship**

昊宇坚持自主研发和自主生产模式，保证产品质量。公司拥有现代化厂房和行业一流的自动焊接生产研发团队。

Haoyu adheres to the independent R&D and independent production mode to ensure product quality. The company has modern workshops and an industry-leading R&D team for automatic welding production.

## 专业引领 全程品控

**Professional guidance and quality  
control throughout the entire process**

昊宇专注行业 20 余年，规模化、现代化、标准化制造，专业提供“自动化焊接装备一站式供货及服务”。信息化、精细化管理，产品溯源，追求产品“零缺陷”，精益生产，高效运营。

Haoyu has been focusing on this industry for more than 20 years, with large-scale, modern, and standardized manufacturing, specializing in providing "one-stop supply and service of automatic welding equipment". By informationization and refined management, product traceability, Haoyu pursues for "zero defects" in products, lean production, and efficient operation.



# 目录 Catalogue

|   |   |   |  |   |   |   |  |  |
|---|---|---|--|---|---|---|--|--|
| 01  | <b>油缸自动生产线</b><br>Hydraulic Cylinder<br>Automatic Production Line                 | 油缸水平环缝自动焊机.....01-02<br>Hydraulic Cylinder Horizontal Welding Machine                       | 油缸变角度环缝自动焊机.....03-04<br>Hydraulic Cylinder Angle-Changing Welding Machine | 油缸油咀自动焊机.....05-06<br>Hydraulic Cylinder Oil Port Welding Machine | 活塞杆/阀座环缝自动焊机.....07-08<br>Piston Rod Ring /Square Valve Seat Seam Welding Machine | 油缸机器人自动焊机.....09-10<br>Hydraulic Cylinder Robot Welding Machine | 油缸自动组装机.....11-12<br>Hydraulic Cylinder Automatic Assembling Machine | 油缸窄间隙自动焊机.....13-14<br>Hydraulic Cylinder Narrow Gap Welding Machine |
|   |   | 车桥轴头/法兰自动焊机.....15-16<br>Axle Shaft Head /Flange Welding Machine                            |  |   |   |   |  |  |
|   |   | 车桥加强环/直缝自动焊机.....17-18<br>Axle Reinforcing Ring /Straight Seam Welding Machine              |  |   |   |   |  |  |
|   |   | 汽车减震器环缝自动焊机.....19-20<br>Car Shock Absorber Circular Seam Welding Machine                   |  |   |   |   |  |  |
|   |   | 传动轴/散热器自动焊机.....21-22<br>Transmission Shaft /Radiator Welding Machine                       |  |   |   |   |  |  |
|   |   | 汽车离合器/车轮环缝自动焊机.....23-24<br>Car Clutch/Wheel Circular Seam Welding Machine                  |  |   |   |   |  |  |
| 汽车推盘/转向机环缝自动焊机.....25-26<br>Car Plate/Steering Gear Circular Seam Welding Machine |   |   |  |   |   |   |  |  |
| 02  | <b>汽车零部件自动焊机</b><br>Automobile Parts<br>Welding Machine                           |   |  |   |   |   |  |  |
| 03  | <b>铝油箱焊接生产线</b><br>Fuel Tank Welding<br>Production Line                           | 铝油箱焊接生产线.....27-30<br>Fuel Tank Welding Production Line                                     |  |   |   |   |  |  |
| 04  | <b>储气筒焊接生产线</b><br>Air Cylinder Welding<br>Production Line                        | 储气筒焊接生产线.....31-34<br>Air Cylinder Welding Production Line                                  |  |   |   |   |  |  |
| 05  | <b>托辊焊接生产线</b><br>Carrier Roller Welding<br>Production Line                       | 托辊焊接生产线.....35-36<br>Carrier Roller Welding Production Line                                 |  |   |   |   |  |  |
| 06  | <b>啤酒罐焊接生产线</b><br>Beer Keg Welding<br>Production Line                            | 啤酒罐把手、底座/中环缝自动焊机.....37<br>Beer Keg Handle And Base/Middle circular seam Welding Machine    |  |   |   |   |  |  |
|   |   | 啤酒罐咀子自动焊机/气密性测试专机.....38<br>Beer Keg Neck Nozzle Welding Machine/Air Tightness Test Machine |  |   |   |   |  |  |
| 07  | <b>灭火器罐焊接生产线</b><br>Fire Extinguisher Tank<br>Welding Production Line             | 埋弧直缝/双环自动焊机.....39<br>Submerged Arc Straight Seam/Double Ring Welding Machine               |  |   |   |   |  |  |
|   |   | 内环缝/内直缝自动焊机.....40<br>Inner Circular/Straight Seam Welding Machine                          |  |   |   |   |  |  |
| 08  | <b>脚手架环扣生产线/杯扣生产线</b><br>Scaffolding Rosette/Cuplock<br>Automatic Production Line | 脚手架环扣生产线/杯扣生产线.....41-42<br>Scaffolding Rosette/Cuplock Automatic Production Line           |  |   |   |   |  |  |
| 09  | <b>支重轮自动焊机</b><br>Track Roller<br>Welding Machine                                 | 支重轮自动焊机.....43-44<br>Track Roller Welding Machine   |  |   |   |   |  |  |
|   |   | 支重轮自动焊接线.....45-46<br>Track Roller Welding Line   |  |   |   |   |  |  |
| 10  | <b>引导轮自动焊机</b><br>Track Idler<br>Welding Machine                                  | 引导轮自动焊机.....47-48<br>Track Idler Welding Machine  |  |   |   |   |  |  |
|   |   | 引导轮自动焊接线/支重轮自动淬火线.....49-50<br>Track Idler Welding Line/Track Idler Quenching Line          |  |   |   |   |  |  |
| 11  | <b>钢管法兰自动焊机</b><br>Pipe Flange Welding<br>Machine                                 | 钢管法兰环缝自动焊机.....51-52<br>Pipe Flange Welding Machine   |  |   |   |   |  |  |
|   |   | 弯管法兰环缝自动焊机.....53-54<br>Bending Pipe Flange Welding Machine                                 |  |   |   |   |  |  |
| 12  | <b>直缝自动焊机</b><br>Straight Seam<br>Welding Machine                                 | 激光/升降直缝自动焊机.....55<br>Laser/Lifting Straight Seam Welding Machine                           |  |   |   |   |  |  |
|   |   | 拼板/内直缝自动焊机.....56<br>Butt Linear/Inner Straight Seam Welding Machine                        |  |   |   |   |  |  |
| 13  | <b>环缝自动焊机</b><br>Circular Seam Automatic<br>Welding Machine                       | 环缝自动焊机.....57-58<br>Circular Seam Automatic Welding Machine                                 |  |   |   |   |  |  |
| 14  | <b>高压油管自动焊机</b><br>High Pressure Oil Pipe<br>Welding Machine                      | 高压油管自动焊机.....59<br>High Pressure Oil Pipe Welding Machine                                   |  |   |   |   |  |  |
|   |   | 焊割一体专机.....60<br>Welding And Cutting Integrated Machine                                     |  |   |   |   |  |  |
| 15  | <b>焊接修复专机</b><br>Repair Welding/Overlay<br>Welding/Cladding Equipment             | 焊接修复专机.....61-64<br>Repair Welding/Overlay Welding/Cladding Equipment                       |  |   |   |   |  |  |
| 16  | <b>机器人焊接工作站</b><br>Robot Welding Station  | 机器人焊接工作站.....65-68<br>Robot Welding Station   |  |   |   |   |  |  |
| 应用<br>Application   |   | 工件/场景.....69-70<br>Welded workpieces/Welding spots  |  |   |   |   |  |  |

## 油缸水平环缝自动焊机

### Hydraulic Cylinder Horizontal Welding Machine

适用于油缸水平环缝的焊接，一次装夹可以完成多层环缝焊接，高效率、自动化。

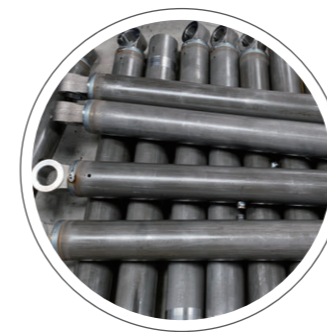
Used for welding horizontal circular seams of hydraulic cylinders. Multi-layer circular seam welding can be finished by one time of jig, with high efficiency and automation.



- 焊枪固定，工件旋转，焊接位置水平。
- 工件采用卡盘或中心孔定位，气动夹紧同步旋转，下置上下料托架。
- 焊枪及气动尾座沿纵向可调，适应多品种焊接。
- 采用 PLC 机控制整机运行。
- 通过触摸式人机界面可以方便地输入及更改参数。变频调速，无级可调，提高设备可靠性。
- 焊接形式，焊接规范可预设，存储。

## Hydraulic Cylinder Horizontal Welding Machine

- Welding gun is fixed while workpiece rotating. Welding position is horizontal.
- Workpiece is positioned by chuck or central hole, pneumatically jugged and rotates synchronously. Loading and unloading rack is underneath.
- Welding gun and pneumatic tailstock can be adjusted longitudinally, suitable for various welding.
- PLC is used to control the whole machine to work.
- By touch human-machine interface, parameters can be conveniently input and modified. Frequency-changing speed regulation and stepless adjustment improve machine reliability.
- Welding mode and specifications can be preset and memorized.



## 油缸变角度环缝自动焊机

### Hydraulic Cylinder Angle-Changing Welding Machine

适用于油缸水平或变角度环缝的焊接，一次装夹可以完成多层环缝焊接，高效率、自动化。

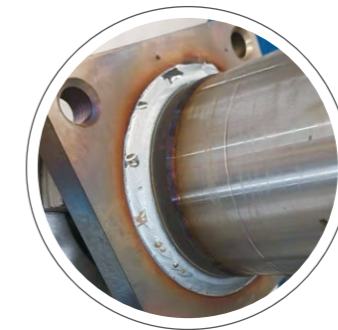
Used for welding horizontal or angle-changing circular seams of hydraulic cylinders. Multi-layer circular seam welding can be finished by one time of jig, with high efficiency and automation.

## Hydraulic Cylinder Angle-Changing Welding Machine

- Welding gun is fixed while workpiece rotating. Welding position is horizontal or by angle.
- Workpiece is positioned by chuck or central hole, pneumatically jugged and rotates synchronously. Loading and unloading rack is underneath.
- Welding gun and pneumatic tailstock can be adjusted longitudinally, suitable for various welding.
- PLC is used to control the whole machine to work. Workpiece rotates by AC frequency stepless.
- Via touch human-machine interface, parameters can be conveniently input and modified. Frequency-changing speed regulation and stepless adjustment improve machine reliability.
- Welding mode and specifications can be preset and memorized.



- 焊枪固定，工件旋转，焊接位置水平或角度焊。
- 工件采用卡盘或中心孔定位，气动夹紧同步旋转，下置上下料托架。
- 焊枪及气动尾座沿纵向可调，适应多品种焊接。
- 采用PLC机控制整机运行，工件旋转采用交流变频驱动。
- 通过触摸式人机界面可以方便地输入及更改参数变频调速，无级可调，提高设备可靠性。
- 焊接形式，焊接规范可预设，存储。



## 油缸油咀自动焊机

### Hydraulic Cylinder Oil Port Welding Machine

适用于油咀与油缸之间环缝的焊接，高效率、自动化。

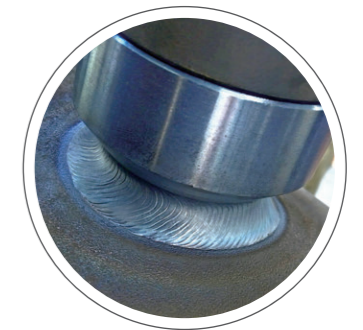
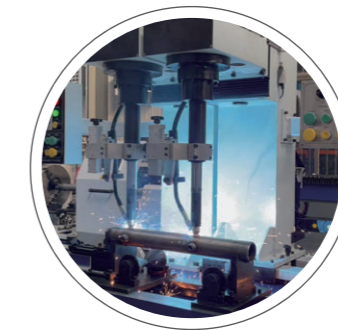
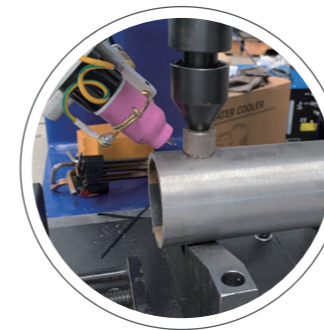
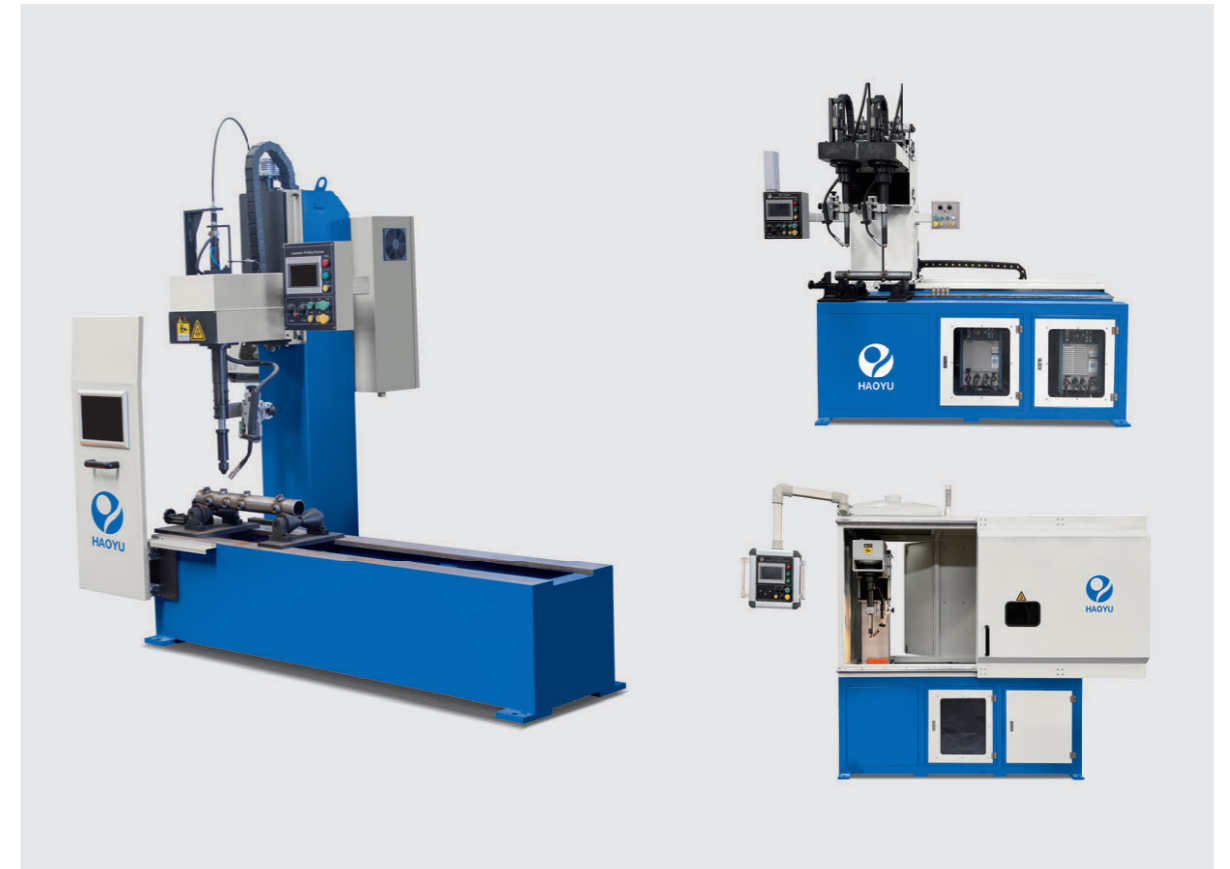
Used for welding the circular seam between oil port and hydraulic cylinder, with high efficiency and automation.



- 焊枪成一定角度可上下，左右和角度调整，采用短距离推丝式焊枪，将焊接电流导至焊接处。
- 焊枪可以连续旋转，而没有气管缠绕现象。两轴数控型采用两轴数控系统控制机头旋转及上下，电机采用进口交流伺服驱动器驱动。
- 采用PLC机控制整机运行。
- 采用大功率进口交流伺服电机控制主轴旋转和焊枪上下，前后，左右及转角。

## Hydraulic Cylinder Oil Port Welding Machine

- Welding gun can be adjusted up and down, left and right, or by angle. Short-distance wire feeding is used to conduct the current welding gun.
- Welding gun can rotate continuously without entangling of air pipes. The two-axis CNC machine adopts two-axis CNC system to control the machine head to rotate and move up and down. The motor is driven by an imported AC servo drive.
- PLC is used to control the whole machine to work.
- Large-power imported AC servo motor controls spindle revolving and the welding gun moves up and down, forward and backward, left and right, or by angle.



## 活塞杆环缝自动焊机

### Piston Rod Ring Seam Welding Machine

适用于多种规格油缸活塞杆的环缝焊接，高效率、自动化。

Used for welding ring seams on piston rods of various hydraulic cylinders, with high efficiency and automation.



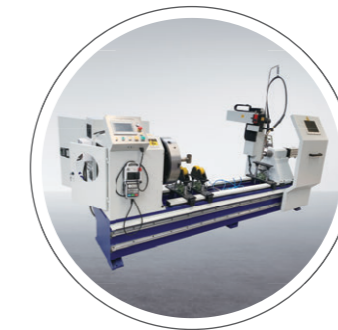
- 采用五轴数控系统，控制旋转、焊枪上下、前后、左右及转角五维动作，主轴旋转速度随工件旋转位置变化，以保证焊接线速度一致。
- 采用PLC机控制整机运行。
- 5-axis CNC system is adopted, which controls the 5-dimension action of rotating, welding gun up and down, forward and backward, left and right, by angle. The spindle revolving speed changes along with the workpiece rotating position, to keep the welding line speed uniform.
- PLC is used to control the whole machine to work.

## 阀座环缝自动焊机

### Square Valve Seat Seam Welding Machine

采用五轴数控系统，控制旋转、焊枪上下、前后、左右及转角五维动作，主轴旋转速度随工件旋转位置变化，以保证焊接线速度一致。

5-axis CNC system is adopted, which controls the 5-dimension action of rotating, welding gun up and down, forward and backward, left and right, by angle. The spindle revolving speed changes along with the workpiece rotating position, to keep the welding line speed uniform.



## 油缸机器人自动焊机

### Hydraulic Cylinder Robot Welding Machine

适用于油缸缸筒（缸底）、活塞杆（杆头）、方阀座、油咀等工件的焊接，油缸附件（方阀座、油咀等）需线下定位点焊、缸底及杆头可在设备上组对后焊接。

设备具有连续稳定工作的能力。

Suitable for welding of hydraulic cylinder barrel (cylinder bottom), piston rod (rod head), square valve seat, oil port, etc. Cylinder accessories (square valve seat, oil port, etc.) need offline positioning spot welding, cylinder bottom and rod head can be assembled on the equipment and then welded.

The equipment has the ability of continuous and stable work.



- The robot teaching pendant is used for programming, and the main axis uses a robot-specific servo motor. It can be linked with a 6-axis robot to complete welding according to the program.
- The welding robot uses Yaskawa/ABB/KUKA/FANUC robots and their dedicated pulse arc welding power supply, high-speed signal transmission, to improve welding quality and production efficiency.
- The water-cooled welding gun dedicated to the robot is used to ensure that the welding system can continue to work stably under the large work specification.
- The workpiece welding positioner in the robot workstation is driven by the Japanese Yaskawa Company's special positioner and controlled by the robot. During the welding process, rotation coordinates the movement of the robot.
- Fixture design in line with ergonomics makes the operator easy to operate, labor saving, reduce the labor intensity of the operator.
- The welding fixture and the positioner of the flexible workstation are quickly connected, which can quickly change the fixture and repeat the positioning accuracy. The tailseat of a single device is equipped with 5# Morse movable center (medium) and 5# Morse  $\phi 250$  sector top plate.
- Equipped with automatic preheating before welding and automatic stress relief after welding. Automatic stress relief of workpiece is realized by program control. Preheating adopts the American Gero brand, and the stress relief gun adopts Japan Nitto.

- 采用机器人示教器编程，主轴采用机器人专用伺服电机可以和6轴机器人联动，按照程序完成焊接。
- 焊接机器人采用安川/ABB/KUKA/FANUC机器人及其专用的脉冲弧焊电源，高速信号传输，提高焊接质量及生产效率。
- 采用机器人专用水冷焊枪，保证焊接系统能够在大工作规范下持续稳定工作。
- 符合人机工程的夹具设计使操作者操作便捷、省力，减轻操作者劳动强度。
- 柔性工作站的焊接夹具与变位机采用快速连接，能够快速更换夹具和重复定位精度，单台设备尾座配置5#莫氏活动顶尖（中型）、5#莫氏  $\phi 250$  扇形顶盘；
- 配备焊前自动预热焊后自动消应力装置。由程序控制实现工件自动去应力。预热采用美国捷睿品牌，消应力枪采用日本日东。
- 配备火焰预热功能，可对工件焊前进行火焰预热功能。



# 油缸自动组装机

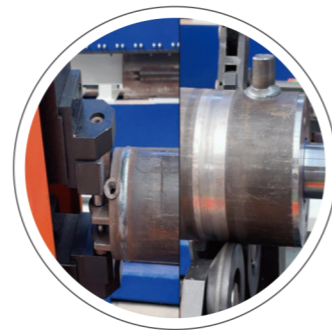
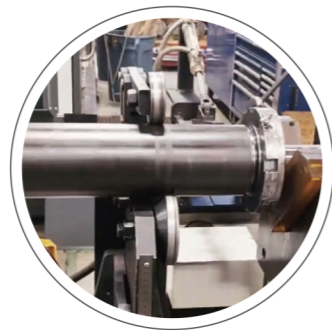
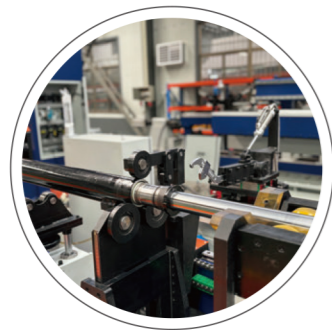
Hydraulic Cylinder Automatic Assembling Machine

## 油缸组装机

Cylinder Assembling Machine

适用于油缸缸筒与缸底及油缸组件（活塞杆）的自动化组装，高精度、专业化。

Used for automatic assembling of hydraulic cylinder barrels with cylinder bottoms and hydraulic cylinder components (piston rods), with high precision.



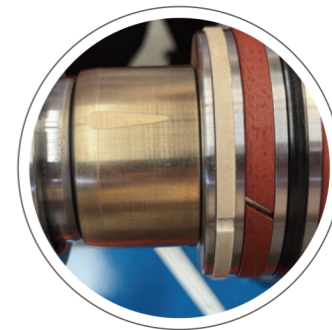
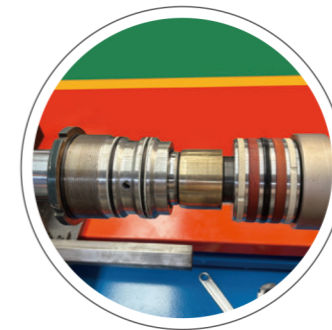
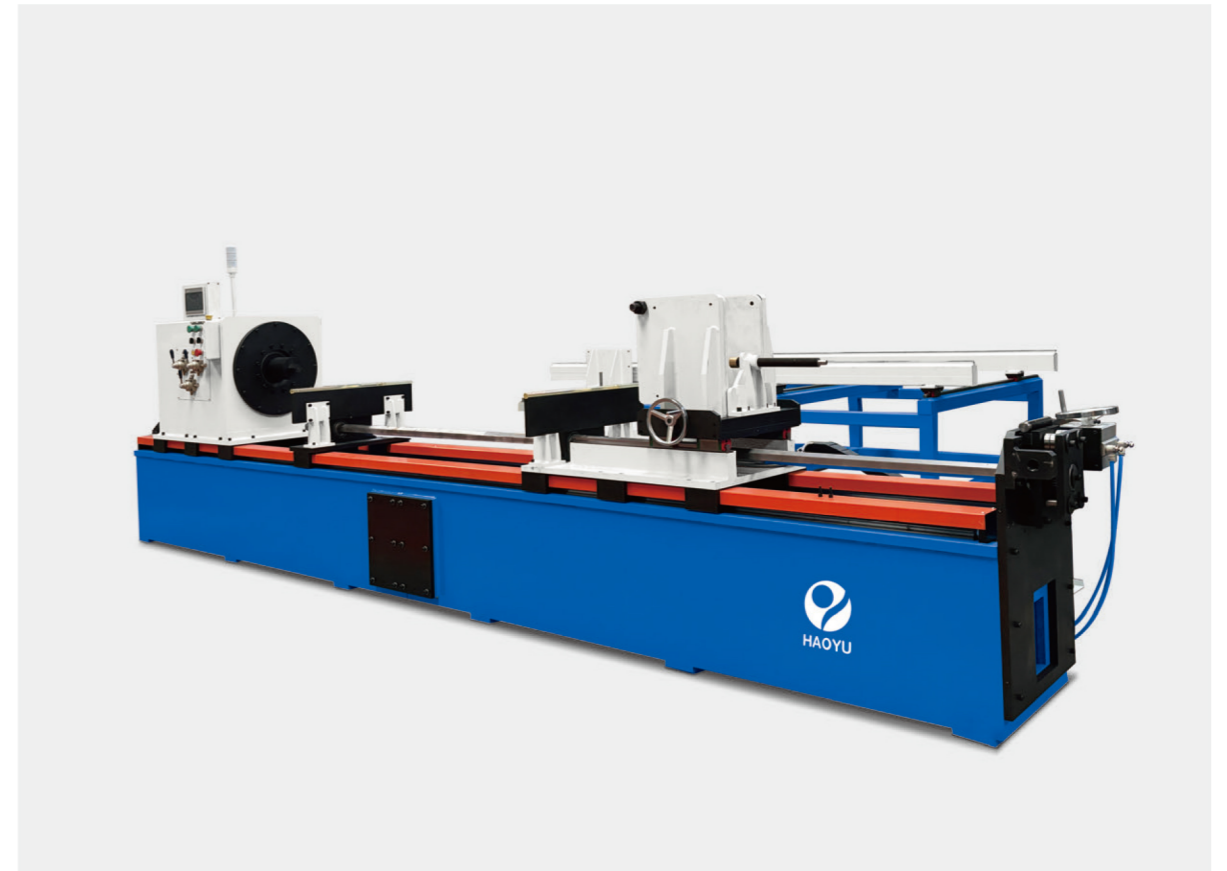
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## 活塞杆组装机

Piston Rod Assembling Machine

适用于活塞杆及组件之间的自动化组装，高精度、专业化。

Used for automated assembling between piston rods and components, with high precision.



## 油缸窄间隙自动焊机

### Hydraulic Cylinder Narrow Gap Welding Machine

主要用于油缸缸筒窄间隙的环缝焊接，焊缝成型均匀，生产过程高效率、自动化。

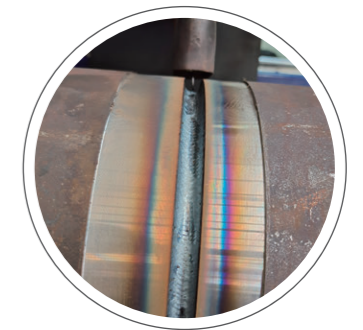
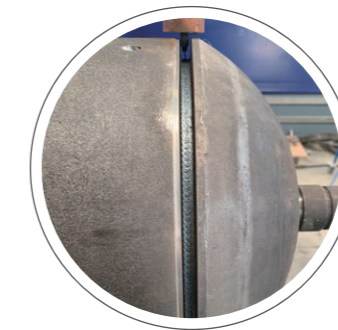
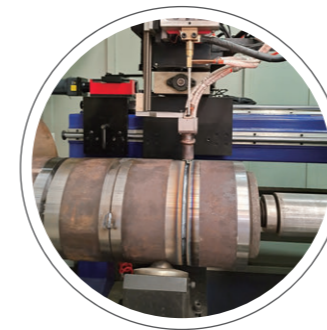
Mainly used for welding narrow gaps in hydraulic cylinder barrels, with uniform weld formation, and high efficiency and automation in the production process.



- 焊枪固定，工件旋转，焊接位置水平。
- 采用焊接结构床身，整体加热回火处理。
- 焊枪及气动尾座沿纵向可调，调完后可锁定。
- 工件采用卡盘定位，气动顶尖顶紧，同步旋转，下置双上下料托架。
- 工件旋转采用交流伺服调速，无级可调，提高可靠性。

## Hydraulic Cylinder Narrow Gap Welding Machine

- Welding gun is fixed while workpiece rotating. Welding position is horizontal.
- The bed is of welded structure and undergoes overall heating and tempering treatment.
- Welding gun and pneumatic tailstock can be adjusted longitudinally and locked after adjustment.
- Workpiece is positioned by chuck, pneumatically top clamped, rotates synchronously. Dual loading and unloading rack is underneath.
- Workpiece rotates by AC servo speed regulation, stepless adjusted, improving reliability.

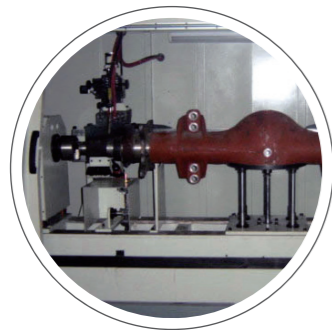


## 车桥轴头自动焊机

### Axle Shaft Head Welding Machine

适用于车桥轴头的环缝焊接，高效率、专业化。

Used for welding circular seam of axle heads, with high efficiency.

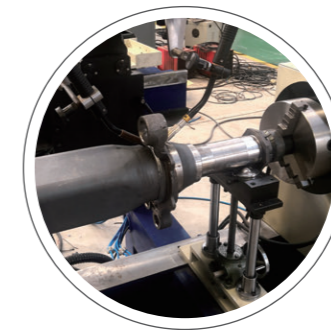
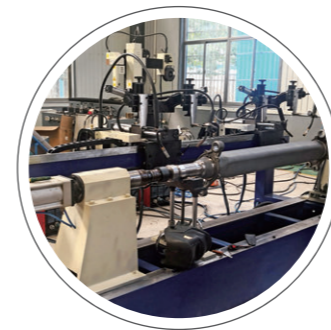
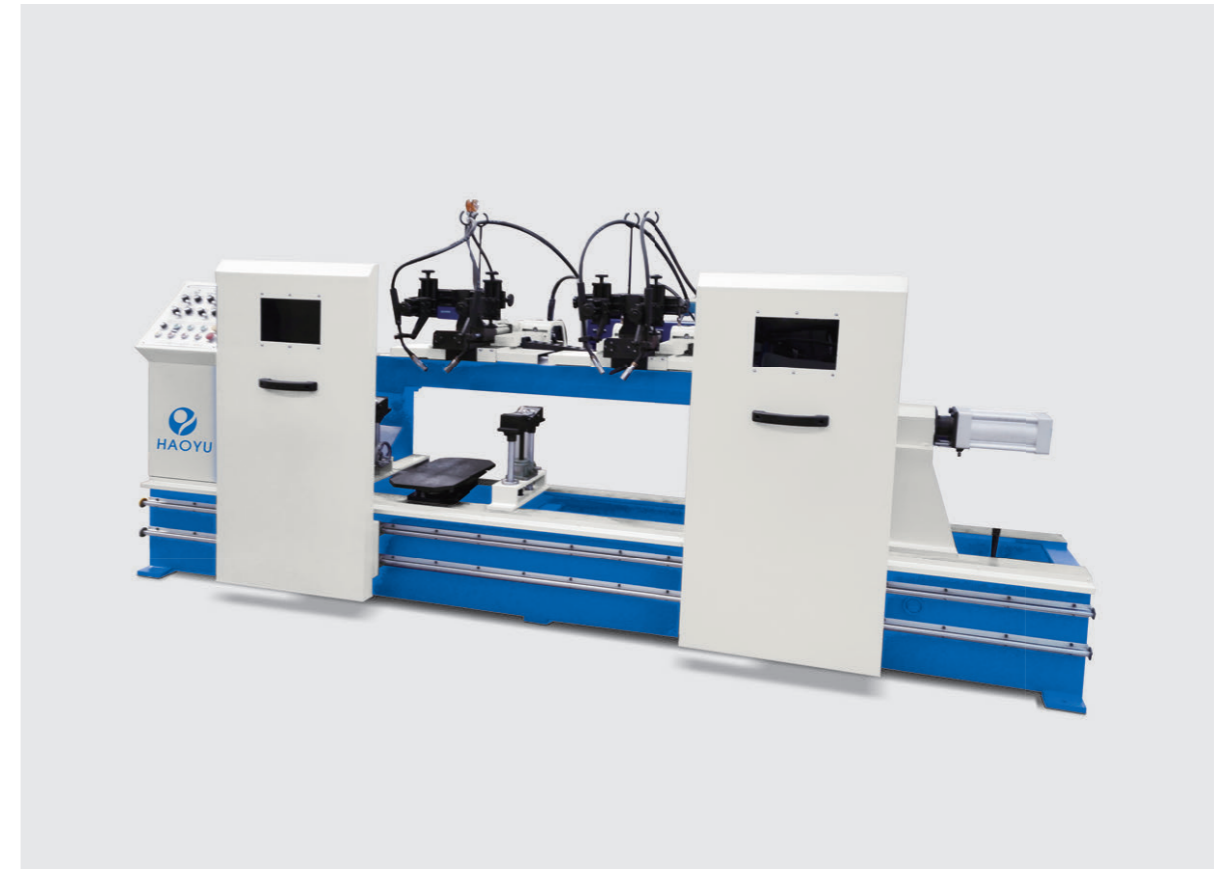


## 车桥法兰自动焊机

### Axle Flange Welding Machine

- 焊枪固定，工件旋转，焊接位置水平。
- 两端由气动顶紧转动。四枪同时焊接，一次成型。专机具有高电压，慢送丝引弧功能，保证引弧可靠。以及低电压，小电流收弧，填满弧坑功能。
- 焊接电压及电流，速度，均可预设及分级调用。
- 采用PLC机控制整机运行，提高设备可靠性。

- Welding gun is fixed, while the workpiece rotating. Welding position is horizontal.
- Ends are pneumatically pushed tightly and rotate. Four guns weld simultaneously with one-step forming. The machine has high-voltage and slow wire feeding arc performance, which guarantees reliable arc ignition; as well as low-voltage and small-current arc ending for filling crater.
- Welding voltage, current and speed can all be preset and called in steps.
- PLC is used to control the whole machine operation, improve its reliability.

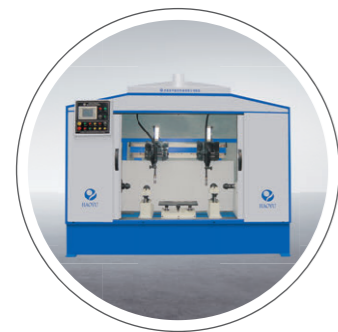


## 车桥加强环自动焊机

### Axle Reinforcing Ring Welding Machine

专机多用于车桥与加强环之间的环缝焊接，数控程序控制，焊缝成型美观、生产过程自动化、高效化。

Commonly used for welding the circular seams between vehicle axles and reinforcing rings. Controlled by CNC programs, with beautiful weld formation and high precision.

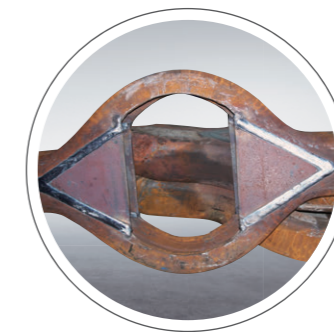
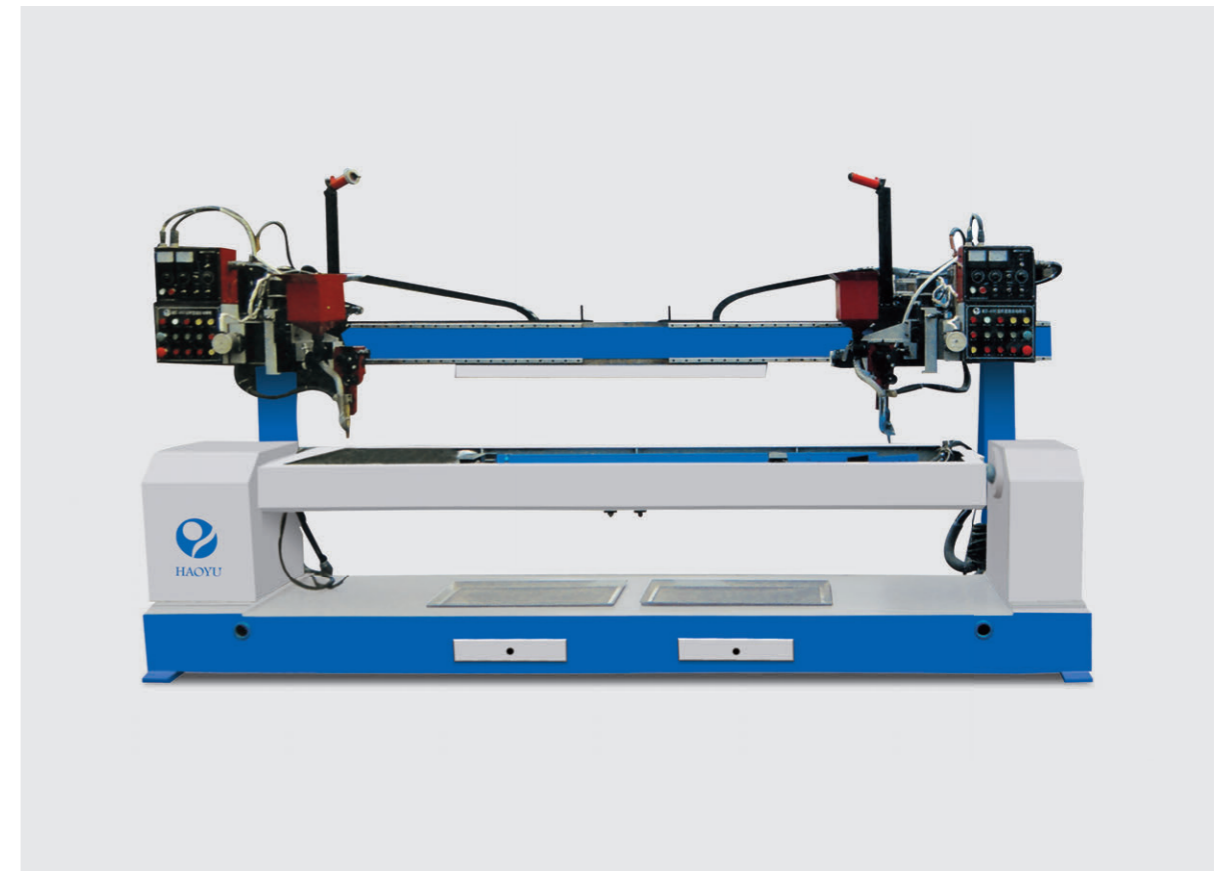


## 车桥直缝自动焊机

### Axle Straight Seam Welding Machine

- 桥壳固定，焊接位置水平，采用双枪埋弧自动焊接。
- 交流伺服电机分别驱动左右机头同步横向行走，两把焊枪行走方向相反，速度分别可调。
- 桥壳由夹具安装定位，并由翻转机构驱动一起翻转180°实现反面焊缝焊接。
- 采用数控系统控制焊枪左右和前后移动，在电弧连续燃烧的情况下，实现对桥壳纵缝和三角焊缝的正常焊接。

- Axle housing is fixed, and welding position is horizontal. Double-gun submerged arc automatic welding is adopted.
- AC servo motor respectively drives left and right machine heads to travel laterally in the same pace, the two guns travel in opposite direction, with the speed respectively adjustable.
- Axle housing is installed and positioned with jig, and turn over by 180° driven by the tilting mechanism, to realize seam welding of the opposite surface.
- CNC system controls the gun moving left and right, forward and backward, with the arc ignition continuously, normal welding to longitudinal seam and triangle seam of axle housing is realized.



## 汽车减震器环缝自动焊机

### Car Shock Absorber Circular Seam Welding Machine

主要用于各种规格的减震器底盖，支架及托盘环缝的自动焊接，高效率、专业化。

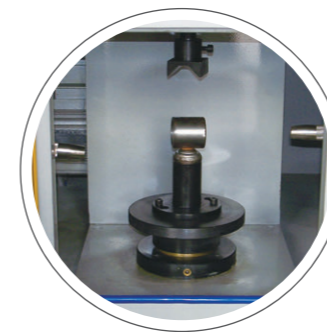
Mainly used for automatic welding circular seams of various shock absorber bottom covers, brackets, and tray, with high efficiency.



- 焊枪成一定角度上下移动，工件旋转。
- 工件由气动夹具夹紧随同旋转，保证焊缝位置不发生偏移。
- 采用PLC机控制整机运行，工件旋转采用交流伺服调速，无级可调，提高设备可靠性。
- 焊接形式，焊接规范可预设，存储和调用。通过人机界面可以方便地更改参数和状态转换。焊枪可作上下、左右、角度调整，以适应焊接要求。
- 气动升降拉门，使用无杆气缸，直线导轨导向。
- 旋转机头安置有三路旋转配气环，将压缩空气导至气动夹具。气动夹具可以连续旋转，而没有气管缠绕现象。

## Car Shock Absorber Circular Seam Welding Machine

- Welding gun moves up and down at a certain angle, while the workpiece rotates.
- The workpiece is pneumatically jugged and rotates together with the jigs, to guarantee that seam position does not deviate.
- PLC is used to control the whole machine operating, the workpiece rotates driven by AC frequency-changing speed regulating, stepless adjustable, improving machine reliability.
- Welding modes and welding specifications can be preset, memorized and called. By human-machine interface, parameters can be easily modified and status converted. Welding gun can be adjusted up and down, left and right, or by angle to meet welding requirements.
- The door is pneumatically lifted and dropped with rodless cylinder, guided by linear track.
- The rotary machine head is equipped with rotary gas distribution ring, which guides the compressed air to the pneumatic jigs. The jigs can continuously rotate, with no tangling of air pipes.

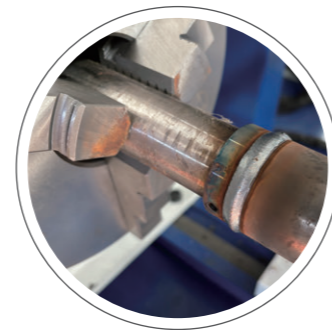


## 传动轴自动焊机

### Transmission Shaft Welding Machine

本型自动焊机用于汽车传动轴，液压油缸等轴、管、筒类零件的环缝自动焊接，是专门针对载重车万向节传动轴的焊接特点设计制造的专用自动化焊接设备。

Used for welding circular seams of automotive transmission shafts, hydraulic cylinders, and other shaft, pipe, and cylinder parts. It is a specialized automatic welding machine designed and manufactured specifically for the welding characteristics of universal joint transmission shafts in heavy-duty vehicles.



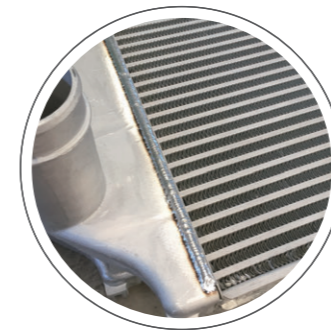
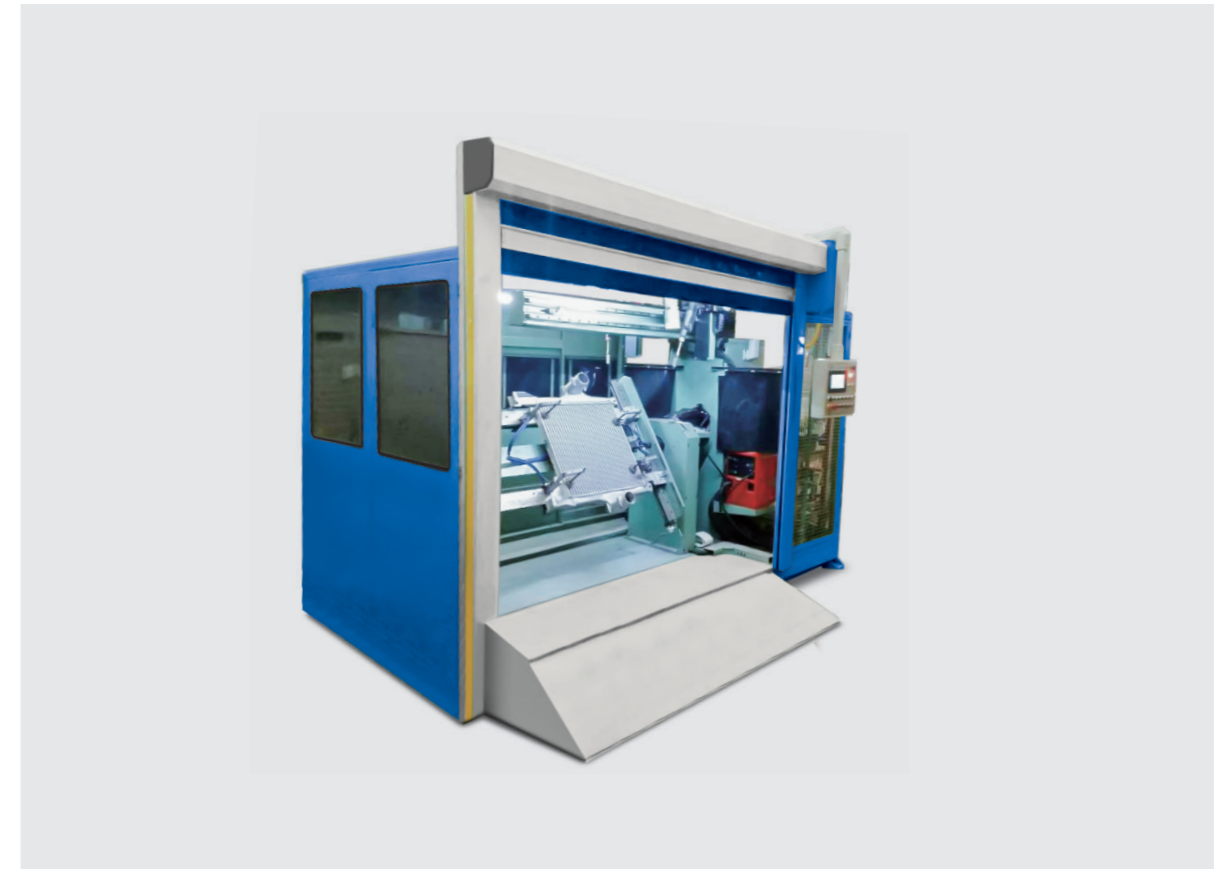
## 散热器直缝自动焊机 Radiator Straight Seam Welding Machine

### 主要特点

- 用于散热器两面四条直缝自动焊接。
- 焊接完一面后，自动翻转至另一面焊接。
- 焊枪自动摆动功能，展宽焊缝，克服组装偏差。
- PLC控制焊接过程，焊枪移动及摆动采用交流伺服调速

### Equipment Features

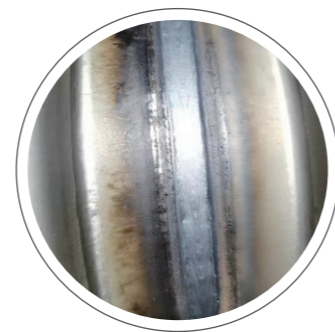
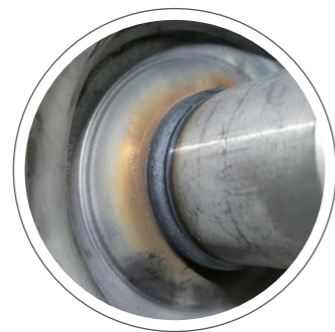
- Used for automatic welding of four straight seams on both sides of the radiator.
- After welding one side, it will automatically flip to the other side for welding.
- The automatic swing function of the welding gun widens the weld seam and overcomes assembly deviations.
- PLC controls the welding process, and the movement and swing speed of the welding gun are regulated by AC servo.



**汽车离合器环缝自动焊机**  
Car Clutch Circular Seam Welding Machine

适用于汽车离合器总成的环缝焊接，焊缝成型美观、生产过程自动化、高效化。

Used for welding circular seams in car clutch assemblies, with beautiful weld formation, automatic production process, and high efficiency.



**车轮环缝自动焊机**  
Wheel Circular Seam  
Welding Machine

适用于车轮的环缝焊接；焊枪固定，工件旋转，焊接位置可调整，适应多品种焊接，高效率，专业化。

Used for welding circular seam of wheels; Welding gun is fixed, while the workpiece rotating. Welding position is adjustable to adapt to various types of welding, with high efficiency.



## 汽车推盘环缝自动焊机

### Car Plate Circular Seam Welding Machine

适用于汽车制动室推盘环缝的焊接，高效率、专业化。

Used in automatic welding of circular seam on automobile brake chamber plate, with high efficiency.



#### 主要特点

- 焊枪成一定角度上下移动，工件旋转。
- 工件由气动卡具夹紧随同旋转，不需预点焊。
- 采用PLC机控制整机运行，工件旋转采用交流变频调速，参数可预存及调用。

#### Equipment Features

- The welding gun moves up and down at a certain angle, causing the workpiece to rotate.
- The workpiece is clamped and rotated by pneumatic clamps, without the need for pre spot welding.
- The whole machine is controlled by a PLC machine, and the rotation of the workpiece is controlled by AC variable frequency speed regulation parameters that can be pre stored and called.

## 转向机环缝自动焊机

### Steering Gear Circular Seam Welding Machine

适用于柱管支架的环缝的焊接，高效率、专业化。

Used in automatic welding of circular seams in column pipe bracket, with high efficiency.



#### 主要特点

- 焊枪左右移动，工件旋转，两者配合完成支架自动焊接。
- 采用PLC机控制整机运行，采用两轴数控系统控制工件旋转及焊枪左右移动提高设备可靠性。
- 焊接形式，焊接规范可预设，存储和调用。

#### Equipment Features

- Welding gun moves left and right, while the workpiece rotates. Both of them coordinate to finish automatic welding of the bracket.
- PLC is used to control the whole machine operating and the welding gun to move left and right, improving machine reliability.
- Welding modes and welding specifications can be preset, memorized and called.

## 铝油箱焊接生产线

### Fuel Tank Welding Production Line

该生产线用于铝合金油箱制造，具体工序为板料吹气分片配合真空上料、板料自动对位激光打标和切膜、板料自动对位四轴折方、纵缝焊接、加油口/放油口/回油口机器人焊接、隔板压装、隔板焊接、环缝焊接及手工补焊、油箱测漏下线。各工序间的工件采用人工+动力辊道进行流转，工位采用升降辊道配合真空吸及吊具进行辅助。自动化生产线可大幅度提高生产率，缩短生产周期，降低生产成本，具有可持续发展的优势。

Used for the manufacturing of aluminum alloy oil tanks. The specific processes include by blowing and separating the metal sheets combined with vacuum loading, automatic alignment of the sheet metal with laser marking and film cutting, automatic alignment of the sheet metal with 4-axis folding, longitudinal seam welding, robot welding of the fuel/drain/return ports, buffer pressing, buffer welding, ring seam welding and manual repair welding, and oil tank leak detection, unloading. The workpiece circulates between each process by manual and power roller conveyors, and moves between workstations assisted by lifting roller conveyors with vacuum suction and lifting equipment. This automatic welding line can significantly improve productivity, shorten production cycles, reduce production costs, with the advantage of sustainable development.



- 将隔板安装在夹持工装上，两端为液压缸提供动力，将其压装至铝油箱内部，一次压装成型，高效率、专业化。
- 采用机器人编程技术，实现油箱内部隔板的环缝焊接，工件自动翻转，设有观察平台，可实时查看焊接成效效果。
- 采用三轴联动数控系统控制，方形油箱外形轨迹采用编辑自动程序数控仿形焊接，设备的机械结构设计合理，各部分功能满足用户要求并有足够的余量。
- The buffer is installed on the jig fixture, with hydraulic cylinders providing power at both ends, and pressed into the oil tank for one-time molding, with high efficiency.
- Robot programming technology is used to weld the internal buffer of the oil tank. Workpiece turns automatically. There is an observation platform from which to view the welding effect in real time.
- Controlled by 3-axis linkage CNC system. The outside trajectory of the square oil tank is edited using an automatic program for CNC imitation to weld. The mechanical structure design of the equipment is reasonable, and the functions of each part meet user requirements with sufficient margin.

## 铝油箱自动焊机

### Fuel Tank Welding Machine

#### 铝油箱四辊圈圆机

##### Aluminum Fuel Tank 4 Roller CNC Rolling Machine



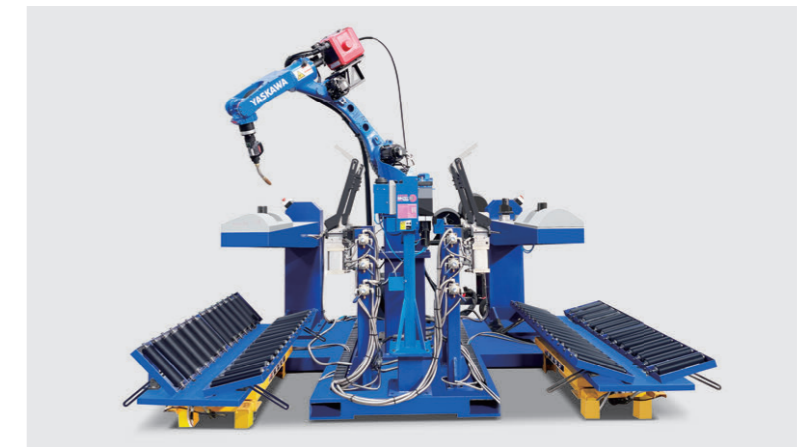
#### 铝油箱直缝自动焊机

##### Aluminium Fuel Tank Straight Seam Welding Machine



#### 铝油箱加油口自动焊机

##### Aluminium Fuel Tank Nozzle Welding Machine



## 铝油箱隔板压装机

### Aluminum Fuel Tank Buffer Automatic Assembly Machine

用于将隔板准确、快速地压装到油箱指定位置，保证油箱隔板的平整度和强度。

It is used to accurately and quickly press the buffer to the specified position of the oil tank to ensure the flatness and strength of the oil tank buffer.



## 铝油箱端盖自动焊机

### Aluminum Fuel Tank Head Automatic Welding Machine

用于方形端盖与油箱之间环缝焊接，高精度，高效化。

It is used for ring seam welding between square end cover and fuel tank, high precision and high efficiency.



## 铝油箱机器人隔板环缝自动焊机

### Robot Automatic Welding Machine For Aluminum Fuel Tank Buffer

采用机器人配合福尼斯CMT焊接电源，激光跟踪系统，完成油箱与隔板之间的方形缝焊接。

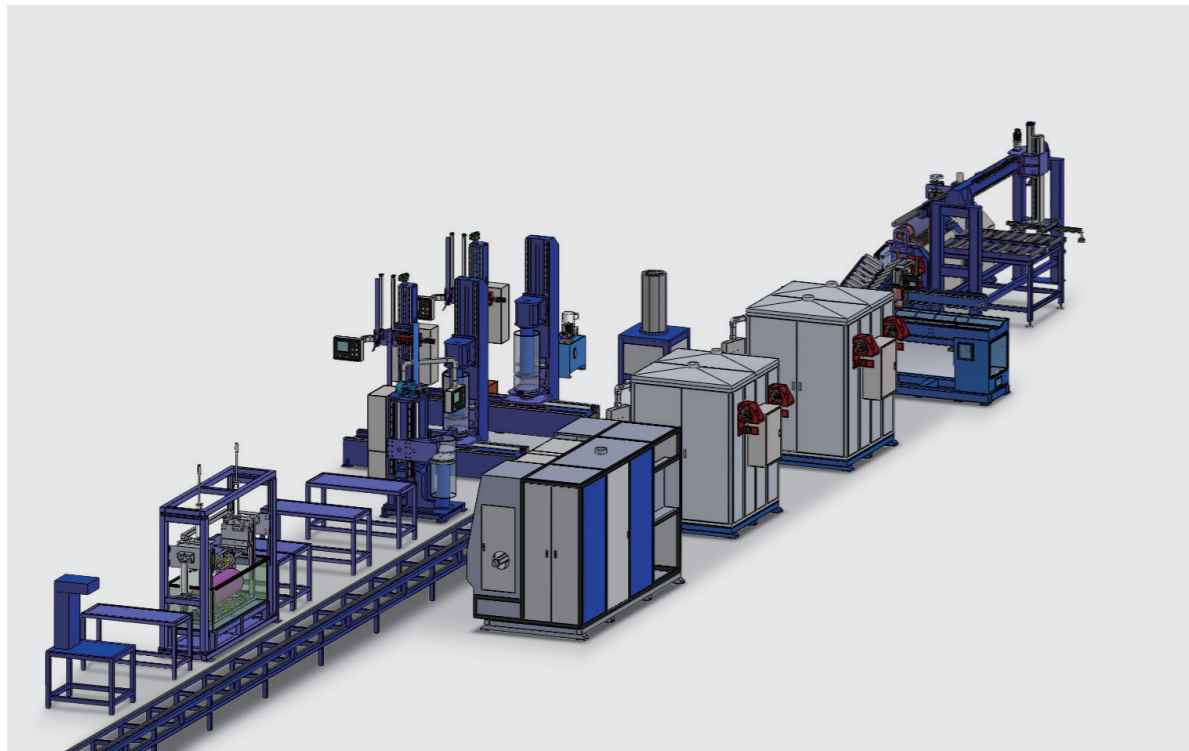
The robot welding system work with Fronius CMT welding power and laser tracking system to complete the square seam welding between the fuel tank and the buffer.



## 储气筒焊接生产线

### Air Cylinder Welding Production Line

自动化储气筒生产线，将冲孔好的铝板放上卷板机送料机，自动送料卷板自动送出，沿着流水线到焊接直缝工位焊接直缝，完成后沿着流水线焊接丝母，压装隔板，焊接，试漏完成沿着流水线到人工组对上下封头放到环缝机上焊接，焊接完成机械手抓到流水线走到试压工位，试压完成到包装生产线，完成擦干，贴标，包装等工序，最后入库。



The punched aluminum plate is placed on the rolling feeding machine, and automatically rolled and sent out, moves along the assembly line to the welding straight seam station to weld. After finished, moves along the assembly line to the welding port, press buffer, weld, leak detection, and then along the assembly line to the manual pairing the upper and lower heads to be placed on the machine for welding. After welding is finished, the robotic arm grabs the workpiece to the trial press station of the assembly line, and then to the packaging line for wiping dry, labeling and packaging, and finally the workpiece goes to the warehouse.

## 储气筒圈圆专机

### Air Cylinder Coiling Machine

液压两辊卷圆机用于各种金属板卷制成圆筒体，卷制的零件圆度精度高，头部无直边，采用PLC控制，触摸屏显示微调，操作简单。

Hydraulic two-roll coiling machine is used to roll various metal plates into cylindrical bodies. The rolled parts have high roundness accuracy, no flat edges on the head. It's controlled by PLC. The touch screen displays fine adjustments and the operation is simple.



## 储气筒直缝自动焊机

### Air Cylinder Straight Seam Welding Machine

焊枪气动上下移动，工件固定，焊缝为平焊缝，工件由气动定位，对中，并由气动琴键压紧，保证焊缝位置不发生偏移。

The welding gun moves up and down pneumatically, the workpiece is fixed, and the weld seam is a flat weld seam. The workpiece is positioned and aligned pneumatically, and pressed by pneumatic keys to ensure that the weld seam position does not shift.



## 储气筒螺母自动焊机

Air Cylinder Nut Welding Machine



## 储气筒双环缝自动焊机

Air Cylinder Double Ring  
Seam Welding Machine

适用于储气筒盖子与筒体之间的环缝焊接，采用前后伺服同步传动（保证双头位置），盖子放进夹具中定位不存在脱落的情况。

Used for welding the circular seam between the air cylinder cover and the cylinder body. Front and rear servo synchronous transmission (ensuring double head position) is adopted, the cover is positioned in the fixture without falling off.



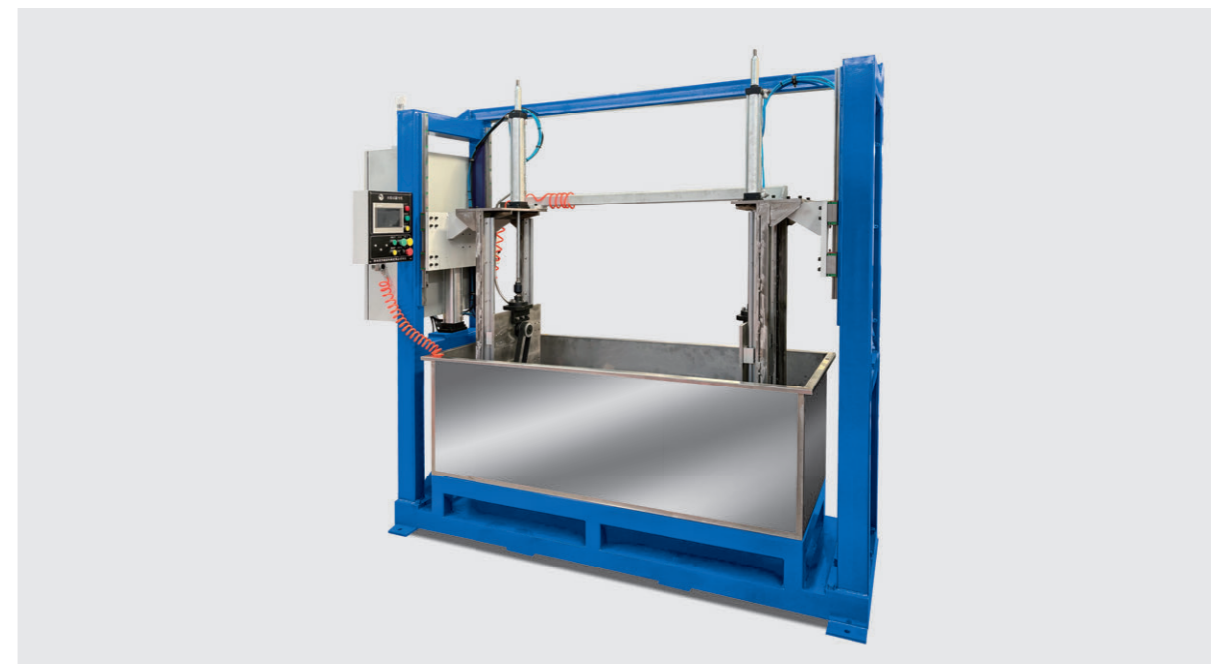
## 储气筒中隔板自动焊机

Air Cylinder Buffer Welding Machine



## 气密性测试专机

Air Tightness Test Equipment

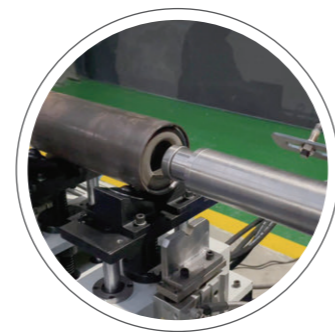
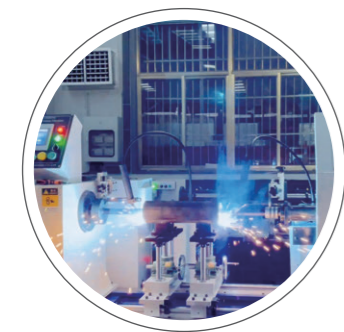
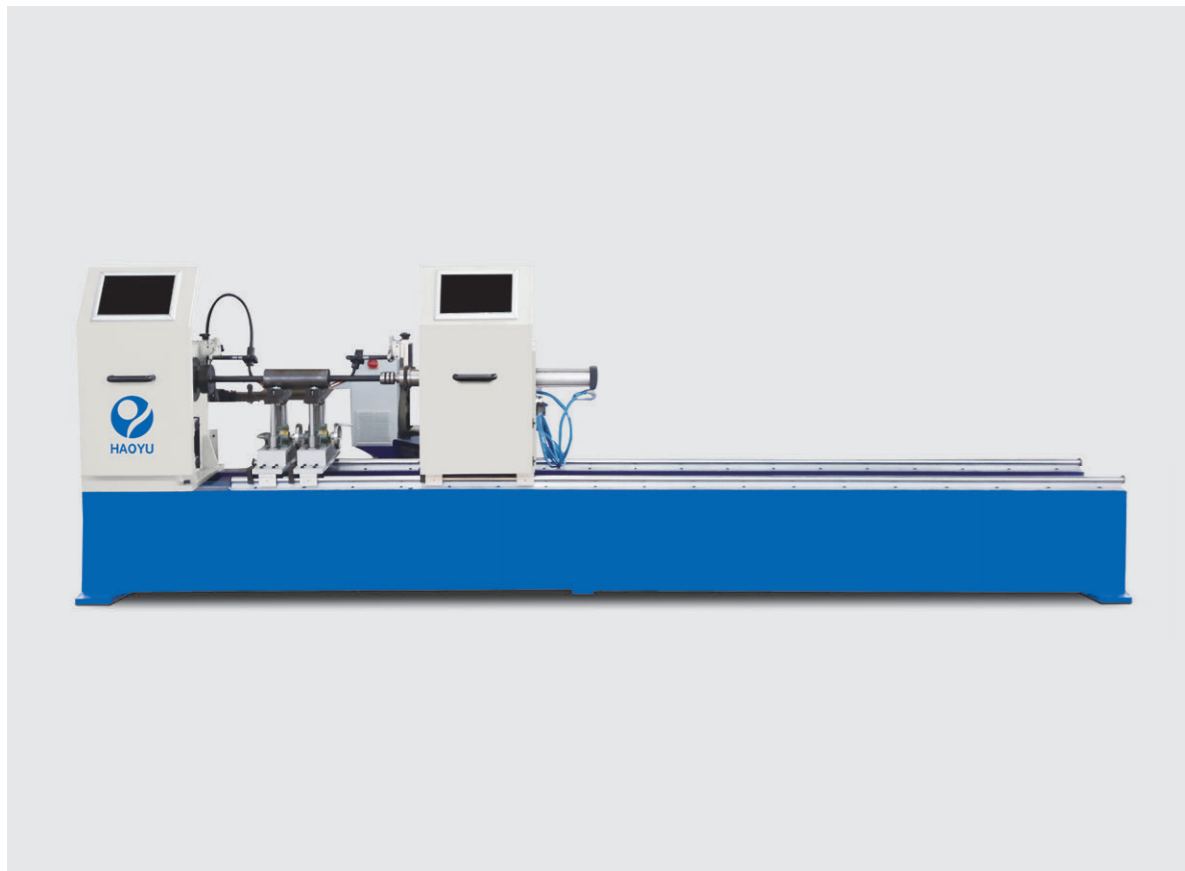


## 托辊自动焊机

### Carrier Roller Welding Machine

适用于托辊外管与内孔上轴承座之间的环缝焊接，采用双焊枪、双电源，高效率、减少焊接变形。

Used for welding the circular seam between the outer tube of the roller and the bearing seat on the inner hole. Double welding guns and double power sources are adopted, to reduce welding deformation with high efficiency.



## 托辊镗床

### Carrier Roller/Conveyor Roller Boring Machine

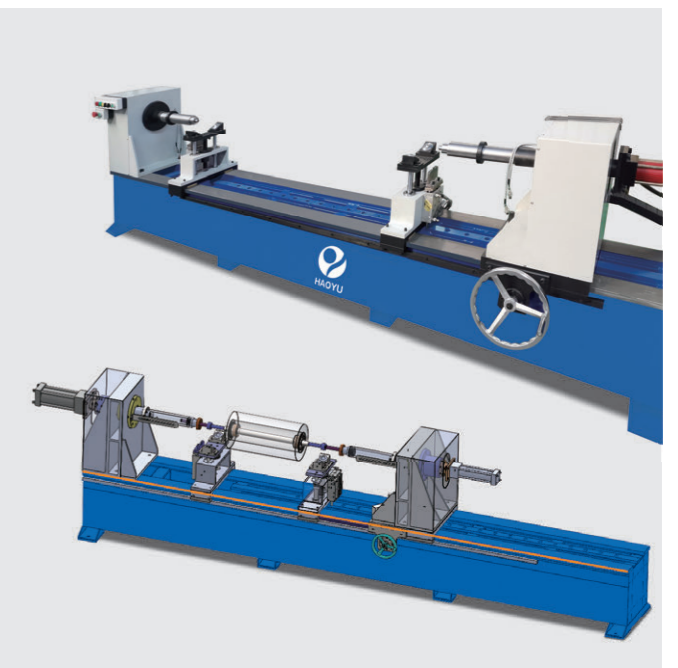


## 托辊压装机

### Carrier Roller Assembly Machine

将要压装的轴承及密封安装在工装轴上，液压缸提供动力，将其压装至轴承座内部，一次成型，高效率、专业化。

The bearings and seals to be pressed are installed on the fixture shaft, with hydraulic cylinders at both ends. They are pressed into the bearing seat for one-time molding, with high efficiency.



## 啤酒罐把手、底座自动焊机

Beer Keg Handle And Base Welding Machine

按照啤酒罐的尺寸定制的定位工装在液压顶紧机构的作用下将啤酒罐筒体的两个部分和对应的把手/底座组合在一起。在PLC的控制下，工件旋转，焊枪固定完成环缝的焊接。

The positioning fixture customized according to the size of the beer keg is used to combine the two parts of the beer keg barrel and the corresponding handle/base under the action of the hydraulic tightening mechanism. PLC controls the workpiece to rotate and the welding gun fixed to finish the welding of the circular seam.



## 啤酒罐自动焊机

Beer Keg Welding Machine

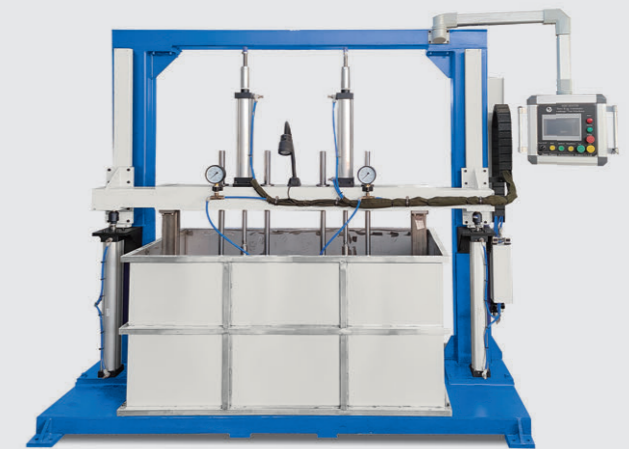
## 啤酒罐咀子自动焊机

Beer Keg Neck Nozzle  
Welding Machine



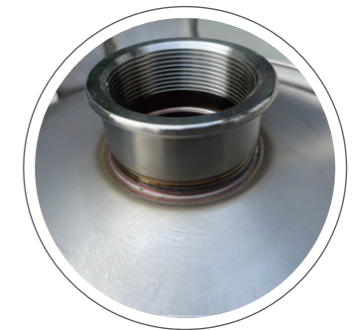
## 气密性测试专机

Air Tightness Test  
Machine



## 啤酒罐中环缝自动焊机

Beer Keg Middle circular seam welding machine



### 埋弧直缝自动焊机

#### Submerged Arc Straight Seam Welding Machine

采用PLC控制埋弧焊接机头纵向移动焊接工件的外直缝。

PLC controls submerged welding head to longitudinally move, to weld the outer straight seam of the workpiece.



### 内环缝自动焊机

#### Inner Circular Seam Welding Machine

按照灭火器内直径的尺寸特制的焊枪带有长枪杆，可以进入罐体内部焊接环缝，焊枪位置固定，罐体旋转。

A specially designed welding gun with a long rod according to the diameter of the fire extinguisher, can enter the interior of the tank to weld the circumferential seam. The welding gun position is fixed and the tank rotates.

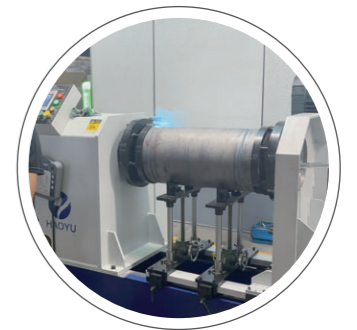
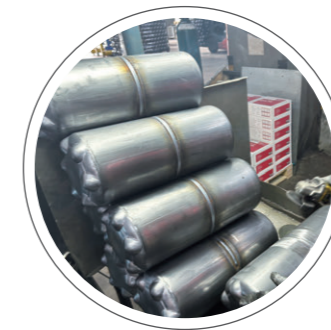
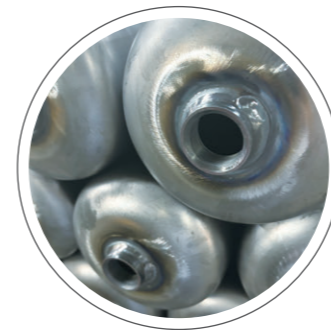


### 内直缝自动焊机

#### Inner Straight Seam Welding Machine

内直缝自动焊机按照灭火器内直径的尺寸特制的焊枪带有长枪杆，沿着焊缝位置纵向移动完成直缝的焊接，罐体位置固定。

A specially designed welding gun with a long rod according to the diameter of the fire extinguisher, moves longitudinally along the weld position to finish the welding of the straight seam, and the position of the tank body is fixed.

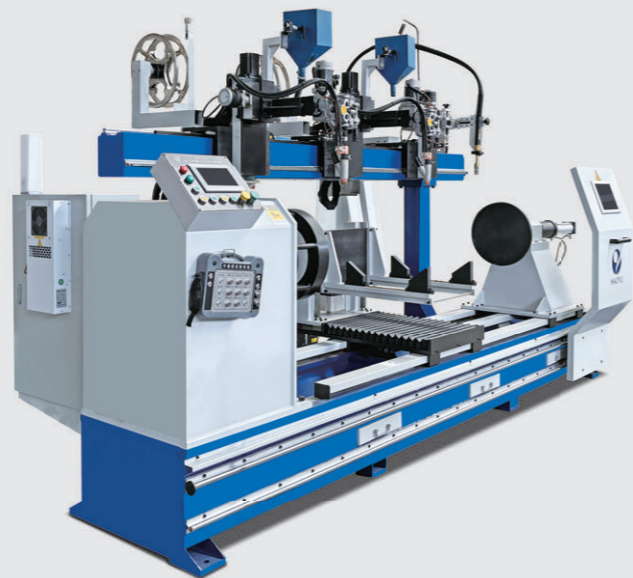


### 埋弧双环自动焊机

#### Submerged Arc Double Ring Welding Machine

在PLC的控制下灭火器旋转，2个埋弧焊接机头固定，同时焊接2个端盖和筒体之间的环缝。

Under the control of PLC, the fire extinguisher rotates, and two submerged arc welding heads are fixed, simultaneously welding the circumferential seams between two end caps and the cylinder body.



# 脚手架环扣生产 线、杯扣生产线

Scaffolding Rosette/Cuplock  
Automatic Production Line

# 08

## 脚手架环扣生产线

Scaffolding Rosette Automatic Production Line

脚手架圆盘自动焊机

Scaffolding Rosette Automatic  
Welding Machine



脚手架底板自动焊机

Scaffolding Jack Base  
Plate Automatic Welding Machine



脚手架横杆自动焊机

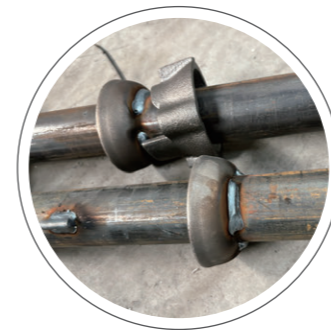
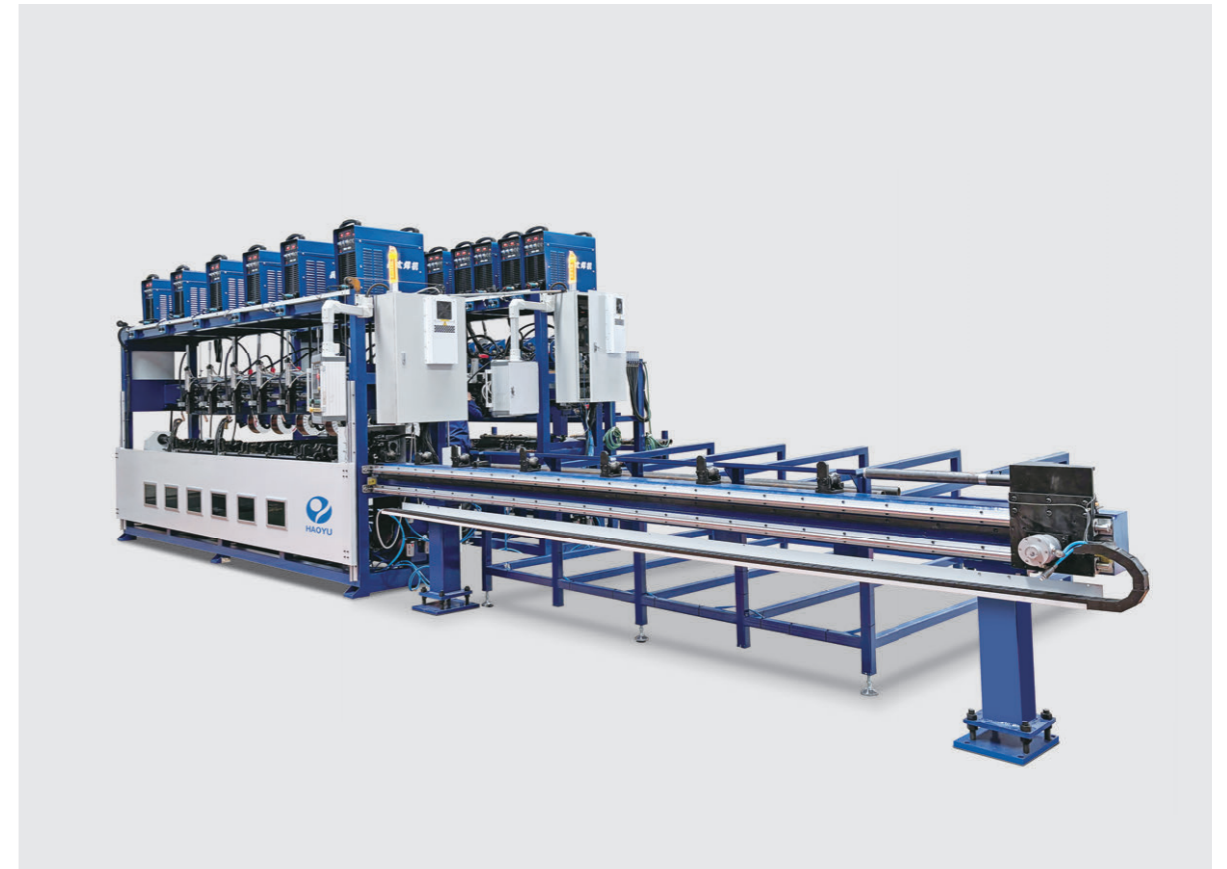
Scaffolding Ledger Automatic Welding Machine

## 脚手架杯扣生产线

Scaffolding Cuplock  
Automatic Production Line

设备配有管件存储台和自动上管站，杯扣自动焊接站，销子自动焊接站，自动下料站和存储台。根据杯扣的长度，杯扣自动焊接站可以同时焊接6个或者8个杯扣。销子自动焊接站可以同时焊接6个销子两侧的12条直缝，或者8个销子两侧的16条直缝。

It's equipped with pipe storage station and automatic pipe loading station, cuplock welding station, pin welding station, automatic unloading station with storage station. According to the length of the cuplock, the cuplock welding station can weld 6 or 8 cuplocks simultaneously. The automatic welding station for pins can simultaneously weld 12 straight seams on both sides of 6 pins, or 16 straight seams on both sides of 8 pins.



# 支重轮自动焊机

Track Roller Welding Machine

## 支重轮自动焊机

Track Roller Welding Machine

适用于支重轮环缝的焊接，高效率、自动化。

Used for welding ring seam of track roller, with high efficiency and automation.

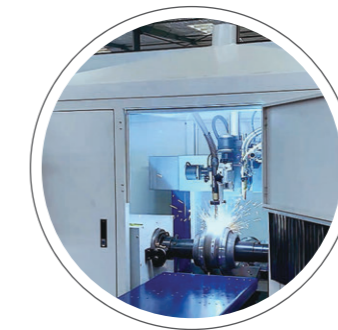


- 焊枪固定，工件旋转，焊接位置水平
- 工件采用中心主轴定位，液压同步夹紧旋转，保证焊缝位置不发生偏移。
- 采取自动上下料方式，焊接过程自动完成，降低工人劳动强度。
- 采用 PLC 机控制整机运行，工件旋转采用交流变频调速，无级可调，提高设备可靠性。
- 焊接形式，焊接规范可预设，存储和调用。
- 焊枪可作上下、左右、角度调整，以适应焊接要求。
- 自动预热，预热时间及长度可预设。

# 09

## Track Roller Welding Machine

- Welding gun is fixed while workpiece rotating. Welding position is horizontal.
- Workpiece is positioned by central spindle, jugged pneumatically, and rotates synchronously, making sure the weld position does not deviate.
- Automatic loading and unloading is adopted. Welding process is accomplished automatically, so the labor intensity of workers is reduced.
- PLC is used to control the whole machine to work. The rotating speed of the track roller is regulated by AC variable-frequency speed inverter stepless, which improves the machine reliability.
- The welding mode and welding specification can be preset, memorized, and called.
- The welding gun can be adjusted up and down, left and right, or by angle, so as to meet welding requirements.
- Automatic preheating. Preheating time and length can be preset.



### 支重轮自动焊接线

#### Track Roller Welding Line

主要用于型号为190~228节距支重轮自动上料、预热、焊接及焊接后输送至热处理炉，生产过程能实现自动化、高精度、多品种批量生产。

Mainly used for automatic loading, preheating, welding, and conveying to heat treatment furnaces for 190~228 pitch track rollers. It can achieve automatic, high-precision, and batch production of multiple varieties.



- One visual robot is equipped for two welding machines. The visual robot is placed between the two welding machines and uses 3D visual recognition to grab and load workpiece from the workpiece bucket. Safety fences are installed around.
- Each welding machine has preheating and welding stations, with fixed positions for preheating and welding. Through visual camera, the robot grabs the workpiece to load. Welding position is horizontal.
- Pneumatic chucks on both sides clamp the half wheel body, and the workpiece is clamped through hydraulic drive and so rotates synchronously, making sure the weld position does not deviate. The machine has high-voltage and slow wire feeding arc performance, which guarantees reliable arc ignition; as well as low-voltage and small-current arc ending for filling crater.
- The visual robot loads workpiece for the two welding machines. For unloading, the workpiece is lifted by the cylinder and rolls away through a track. The welding process is automatically completed to reduce the labor intensity. Push-wire is used as feeding mode, guarantees feeding stability.
- PLC is used to control the whole machine to work. The rotating speed of the track roller is regulated by AC servo speed regulating, stepless adjusted, which improves the machine reliability. The welding mode and welding specification can be preset, memorized, and called.
- By touch human-machine interface, parameters can be easily modified and status converted. Welding gun can be adjusted up and down, left and right, or by angle to meet different welding requirements.
- Automatic preheating. Preheating time and length can be preset.



- 设备采用1台视觉机器人配备2台焊接专机使用，视觉机器人安置在两台焊接专机中间通过3D视觉识别从料框里抓取进行上料，四周配备安全围栏。
- 单台焊接专机配备预热及焊接两工位，预热和焊接工位位置固定，通过视觉，机器人抓取实现上料，焊接位置水平。
- 工件通过两侧气动卡盘涨紧半轮体，通过液压驱动夹紧工件实现同步旋转，保证焊缝位置不发生偏移。专机具有高电压，慢送丝引弧功能，保证引弧可靠，以及低电压，小电流收弧，填满弧坑功能。
- 采取视觉机器人给两台焊接专机上料方式，下料由气缸顶起通过轨道滚走。焊接过程自动完成，降低工人劳动强度。采用推丝式送丝方式，保证送丝稳定性。
- 采用PLC机控制整机运行，工件旋转采用交流伺服调速，无级可调，提高设备可靠性。焊接形式，焊接规范可预设，存储和调用。
- 通过触摸式人机界面可以方便地更改参数和状态转换。焊枪可作上下、左右、角度调整，以适应焊接要求。
- 自动预热，预热时间及长度可预设。



## 引导轮自动焊机

### Track Idler Welding Machine

适用于引导轮环缝的焊接，焊接高效率、自动化。

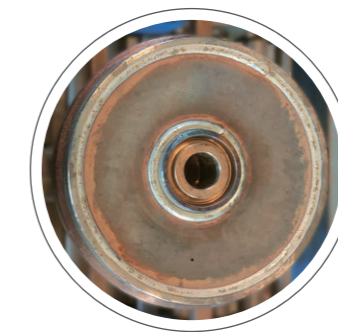
Used for welding track idler circular seams, with high welding efficiency and automation.



- 焊枪固定，工件旋转，焊接位置可调。双工位焊接过程自动完成，提高效率。
- 采取气动上下料及工件的自动翻转方式，焊接过程自动完成，降低工人劳动强度。
- 采用推丝式送丝方式，保证送丝稳定性。
- 采用PLC机控制整机运行，工件旋转采用交流变频调速，无级可调，提高设备可靠性。焊接形式，焊接规范可预设，存储和调用。通过触摸式人机界面可以方便地更改参数和状态转换。
- 焊枪可作上下、左右、角度调整，以适应焊接要求。

## Track Idler Welding Machine

- Welding gun is fixed, while the idler rotating. Welding position is adjustable. Double station welding process is finished automatically, efficiency is improved.
- Pneumatic loading and unloading and automatic turning are adopted. The welding process is automatically finished, so as to reduce labor intensity.
- Push-wire is used as feeding mode, guarantees feeding stability.
- PLC is used to control the whole machine to work. The rotating speed of the idler is regulated by AC frequency stepless, which improves the reliability of the welder. The welding mode and welding specification can be preset, memorized and called. By touch human-machine interface, parameters can be easily modified and status converted.
- The welding gun can be adjusted up and down, left and right, or by angle, so as to meet the different welding requirements.



# 引导轮自动焊接线 支重轮自动淬火线

Track Idler Welding Line  
Track Idler Quenching Line

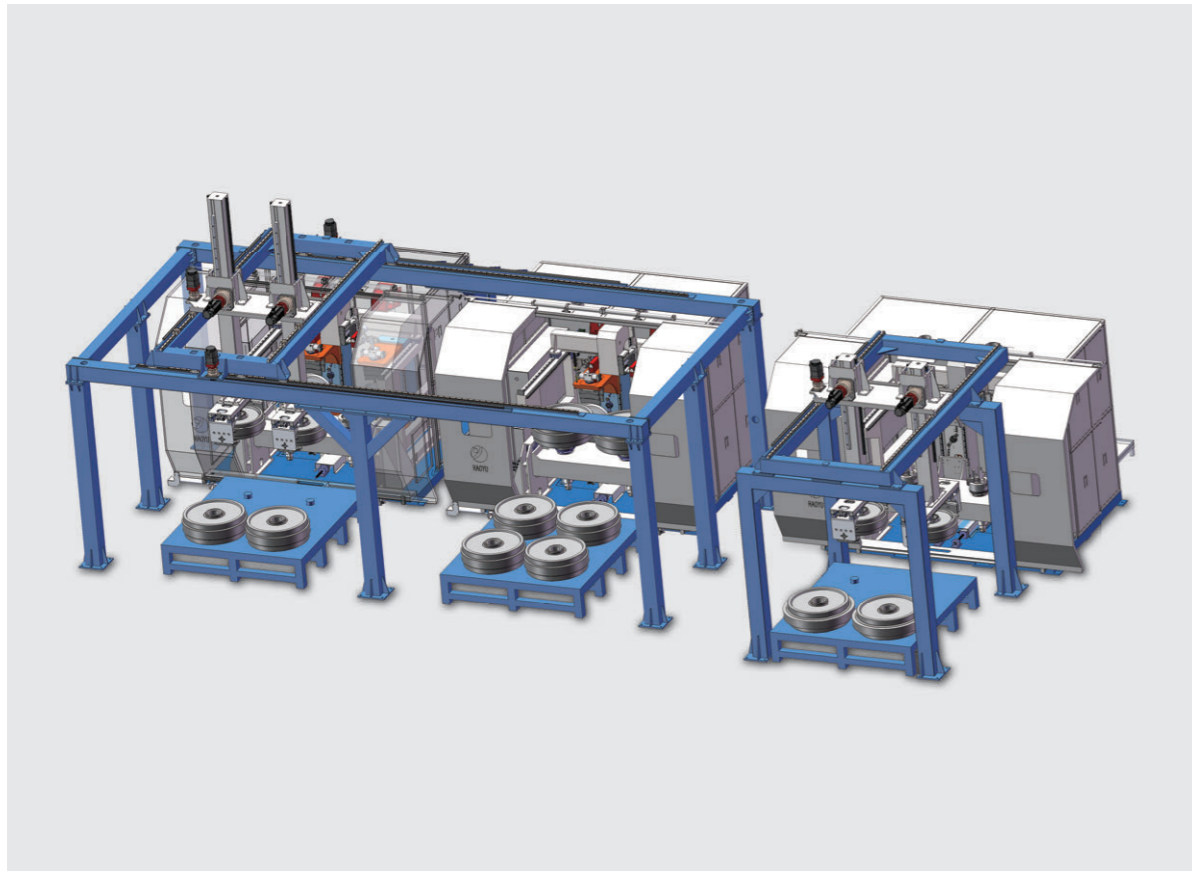
# 10

## 引导轮自动焊接线

Track Idler Welding Line

利用桁架输送工件实现设备自动上下料，工件可自动翻面，整个焊接过程无人参与，自动完成，安全性高、经济性、可靠性强。

Truss is used to transport the idler to achieve automatic loading and unloading, and the idler can be automatically flipped over. The entire welding process is finished automatically without worker participation, highly safe, economic, and reliable.

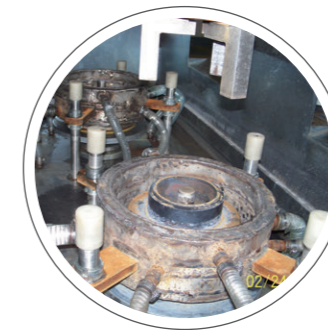
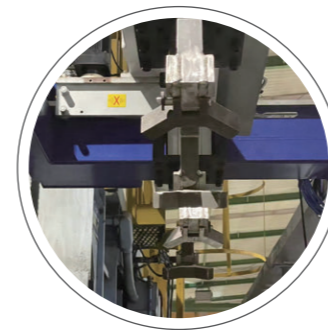


## 支重轮自动淬火线

Track Idler Quenching Line

支重轮自动淬火线是对支重轮工件的热处理，将工件加热至适宜温度后迅速冷却，调整其组织结构及性能，提升其强度、硬度和耐磨性，增强支重轮的性能和质量。

Used for heat treatment of the idler. The idler is heated to a proper temperature and rapidly cooled to adjust its structure and properties, improve its strength, hardness, and wear resistance, and enhance its performance and quality.



## 钢管法兰环缝自动焊机

### Pipe Flange Welding Machine

适用于直形钢管与法兰盘之间环缝的焊接，高效率、自动化。

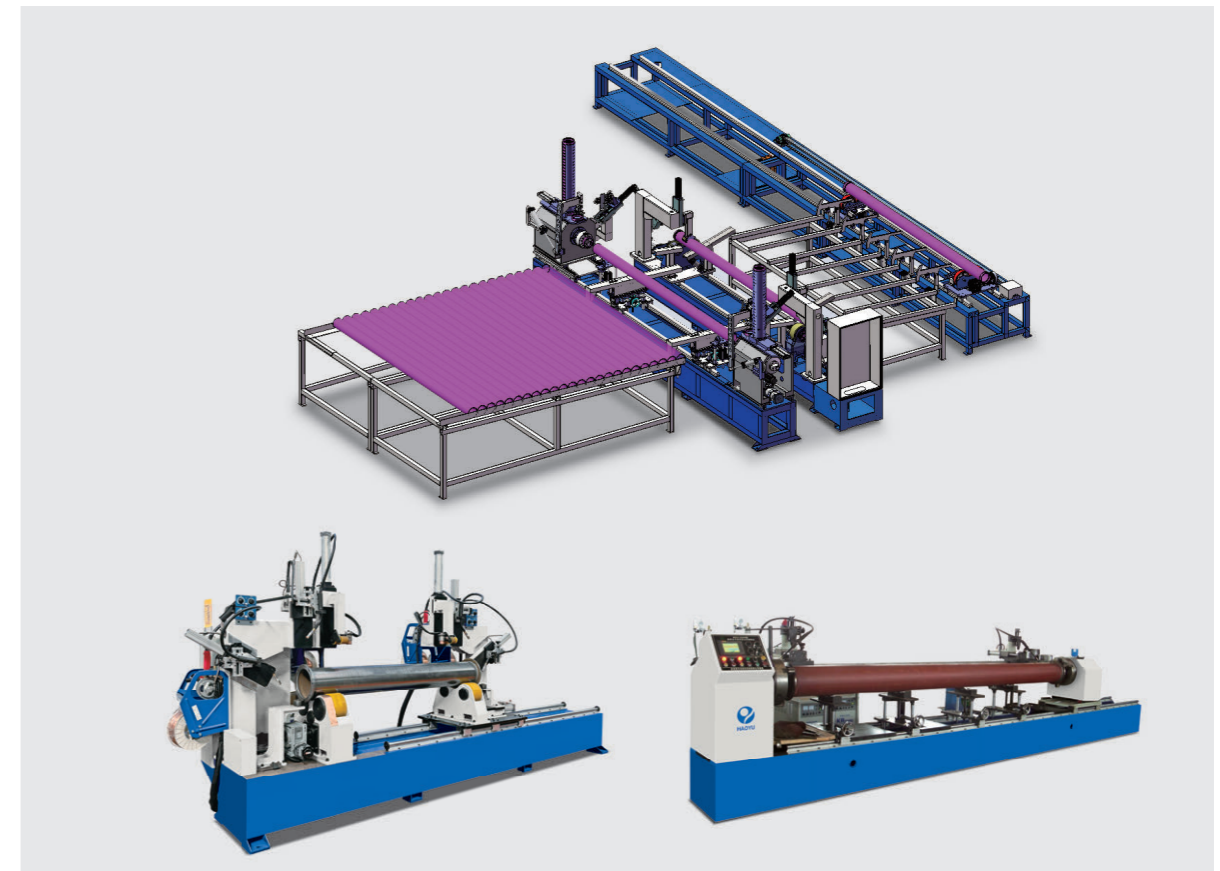
Used for welding the circular seam between straight pipes and flanges, with high efficiency and automation.



- 焊枪固定，工件旋转，焊接位置水平。工件一端由动力头夹持转动。
- 采用双焊枪，双电源，提高工作效率。
- 采取手动上下料方式，焊接过程自动完成。焊枪、主轴箱及尾座沿纵向可调，适应多品种焊接。采用 PC 机控制整机运行，交流变频调速，提高设备可靠性。
- 采用中心孔定位，尾座移动气动顶紧方式。

## Pipe Flange Welding Machine

- Welding gun is fixed while workpiece rotating, Welding position is horizontal. One end of the workpiece is gripped by power head and rotates.
- Double guns and double power sources are adopted to improve work efficiency.
- Manual loading and unloading the workpiece. Welding finishes automatically. Welding gun, spindle case and tailstock are adjusted in longitudinal direction, suitable for various welding. PC is used to control the whole machine operation. AC frequency-variable speed regulating is adopted, to improve machine reliability.
- Workpiece is positioned by central hole, and and pushed tightly by tailstock moving pneumatically.



## 弯管法兰环缝自动焊机

### Bending Pipe Flange Welding Machine

适用于各种规格弯管与法兰盘之间圆形角环缝的焊接，高效率、自动化。

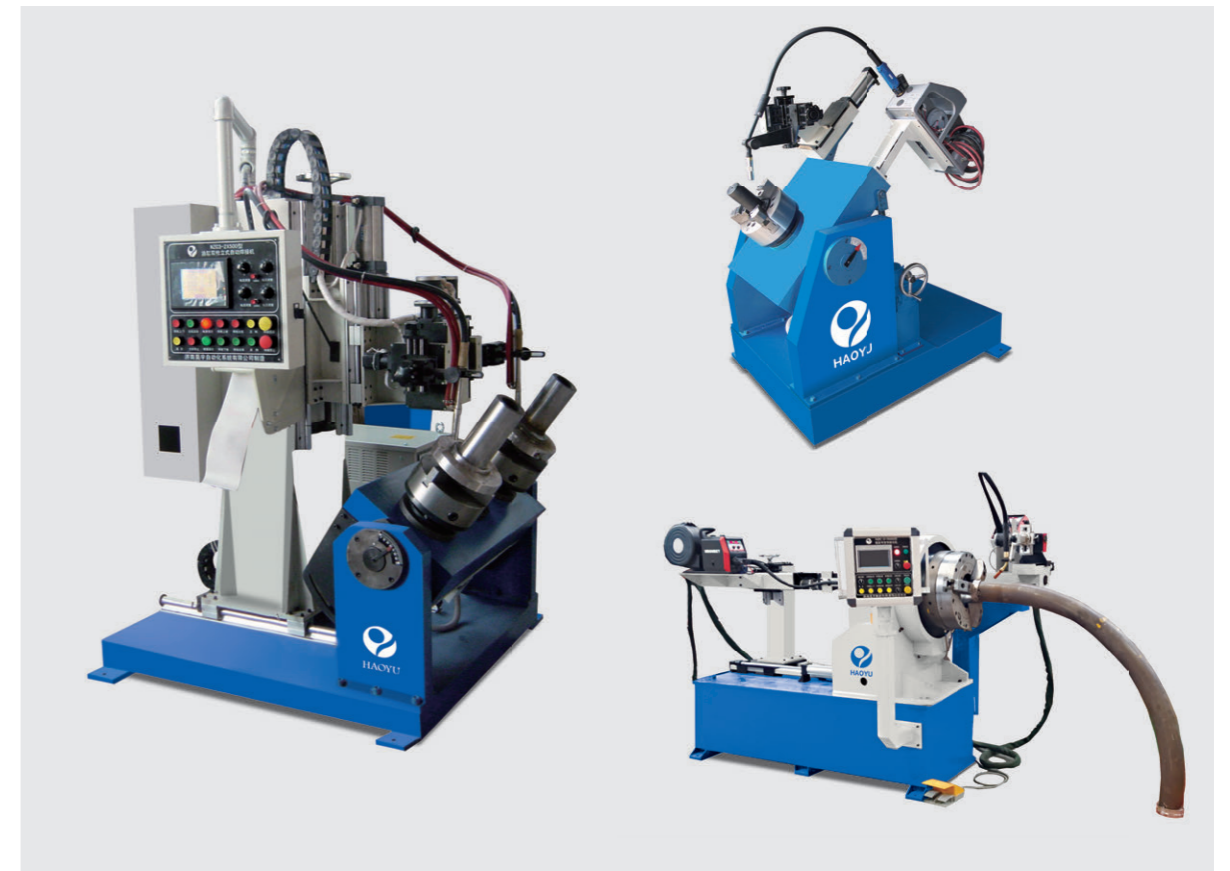
Used for welding circular corner seams between various bent pipes and flanges, with high efficiency and automation.



- 该机主要用于管与管对接环缝自动焊接。
- 采用中空手动卡盘夹紧长工件，另一端为气动卡盘夹紧管头，气动顶紧，主轴箱驱动旋转，一次装夹，完成多道焊缝轨迹。
- 焊枪设有摆动提升机构和快速切换预备及焊接工位。
- 长工件设有工件托料行走架。
- 采用 PLC 机控制整机运行。
- 焊接形式可预设，存储和调用。

## Bending Pipe Flange Welding Machine

- Mainly used for tube butt circular seam welding.
- Long workpiece is jugged by hollow manual chuck, the other end is jugged by pneumatic chuck and pushed pneumatically. It rotates driven by spindle case. Multi seam tracks are finished with one time of jig.
- The gun has swing and lifting mechanism and quick switch preparation and welding station
- Long workpiece has conveyor rack.
- PLC controls the whole machine to work.
- Welding mode can be preset, memorized and called.



# 直缝自动焊机

Straight Seam Welding Machine

## 激光直缝自动焊机

Laser Straight Seam Welding Machine

采用PLC控制激光焊接头纵向移动焊接工件的外直缝，激光焊接电源使用瑞科或者创鑫品牌。

PLC controls the laser welding head to move longitudinally and weld the outer straight seam of the workpiece. The laser welding power supply is of Ruike or Chuangxin brands.



## 拼板直缝自动焊机

Butt Linear Seam Welding Machine

适用于板材拼接的外直缝焊接，可焊接钢板、铝板、不锈钢板等。设备左右各配有一个带有万向轮的调整台，方便调整和移动板材。

Used for external straight seam welding of sheet metal splicing, can weld steel plates, aluminum plates, stainless steel plates, etc. Each side of the device is equipped with an adjustment table with universal wheels for easy adjustment and movement of the plates.



## 升降直缝自动焊机

Lifting Straight Seam Welding Machine

适用于焊接直径超过1米的大直径工件或者直径调整范围超过1米的工件外缝，采用液压系统控制焊接平台升降方便上下不同直径的工件。

Used for welding large-diameter workpieces with a diameter exceeding 1 meter or workpieces with a diameter adjustment range exceeding 1 meter on the outer seam. The welding platform is controlled by a hydraulic system for easy lifting and lowering of workpieces with different diameters.

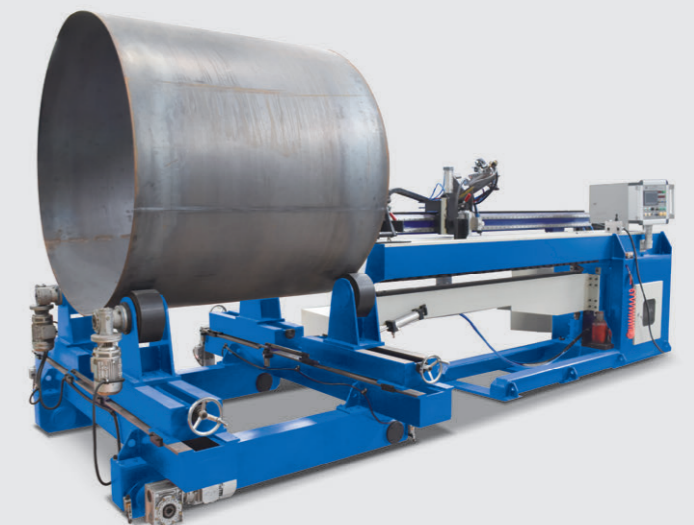


## 内直缝自动焊机

Inner Straight Seam Welding Machine

适用于焊接直径或者高度超过1米的工件的内壁直缝，焊接机头在进入工件内部，沿线性导轨纵向移动完整直缝的焊接。

Used for welding the inner wall straight seam of workpieces with a diameter or height exceeding 1 meter. The welding machine head enters the interior of the workpiece and moves longitudinally along the linear guide rail to finish the welding of the straight seam.



# 环缝自动焊机

Circular Seam Automatic Welding Machine

## 环直一体自动焊机

Circular Seam And Straight Seam 2 In 1 Automatic Welding Machine



## 十字架环缝自动焊机

Manipulator Circular Seam Automatic Welding Machine



## 罐体组焊一体机

Tank Assembly And Welding Machine



## 气罐环缝自动焊机

Air Compressed Tank End Cap Automatic Welding Machine



# 高压油管自动焊机

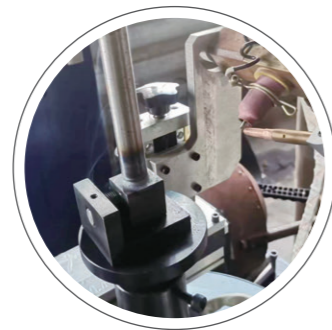
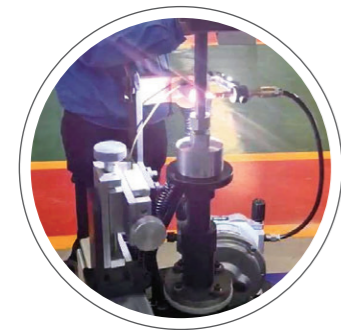
High Pressure Oil Pipe  
Welding Machine

## 高压油管自动焊机

High Pressure Oil Pipe Welding Machine

适用于高压油管的环缝的自动焊接, 定制化工装, 实现焊接精度, 高效率、专业化。

Used for automatic welding of circular seams in high-pressure oil pipes, with customized fixture, achieving high welding accuracy, with high efficiency.

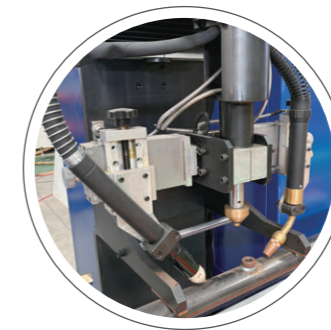
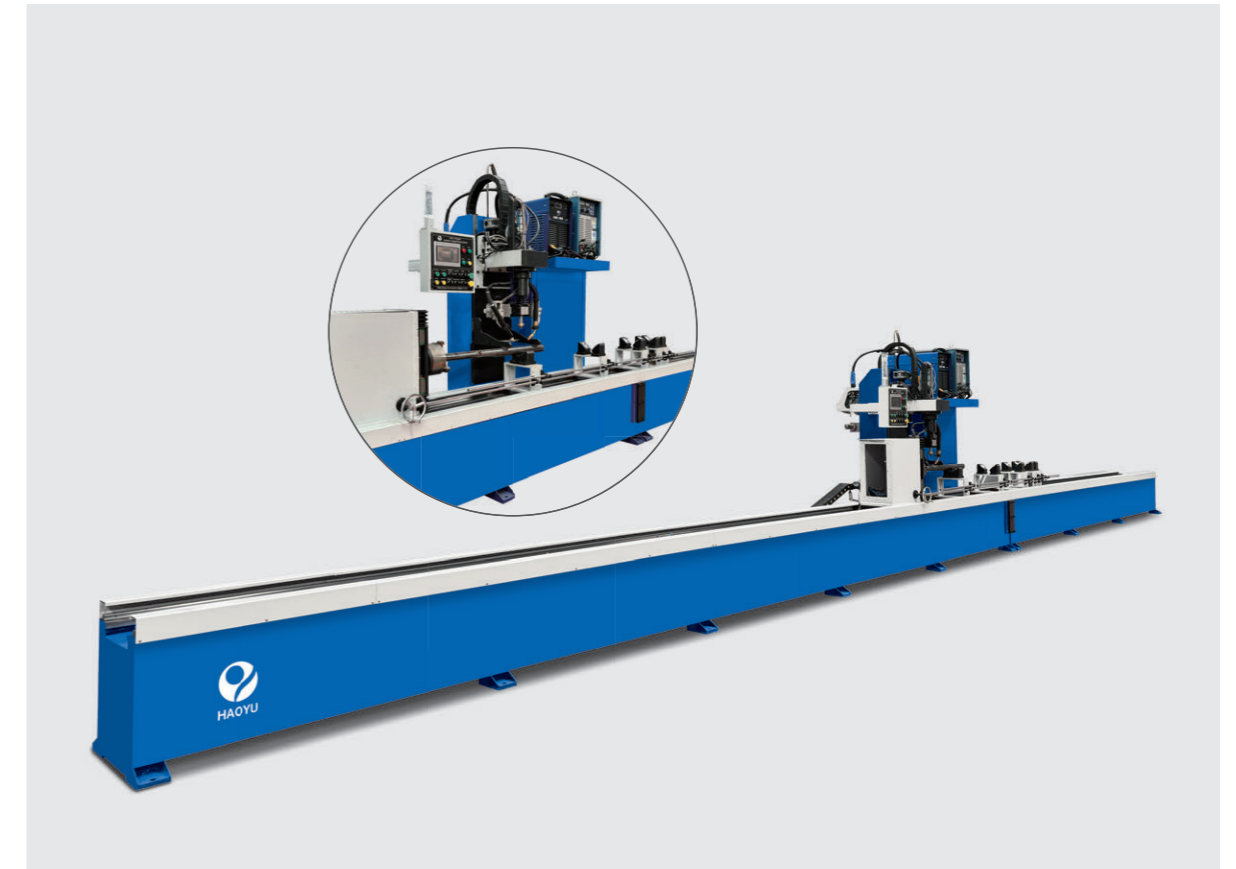


## 焊割一体专机

Welding And Cutting  
Integrated Machine

实现了一台设备完成工件焊接与切割的技术。单机头双枪的结构使焊接与切割过程更具有流畅性, 高效率, 经济性、专业性强。

Welding and cutting workpieces with one single machine. The structure of single head double gun makes the welding and cutting process more smooth, efficient, and professional.



## 内孔堆焊专机

### Inner Hole Cladding Machine

主要用于工件内表面的堆覆焊接，改变工件表面性能，修复工件，增强其耐用性、节省成本。

Mainly used for overlay welding on the inner surface of workpieces, changing the surface properties of workpieces, repairing workpieces, enhancing their durability, and saving costs.



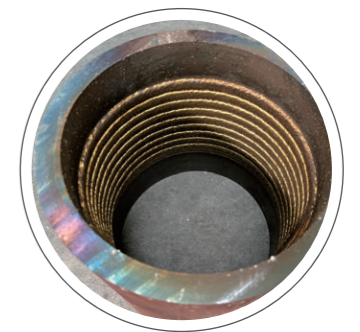
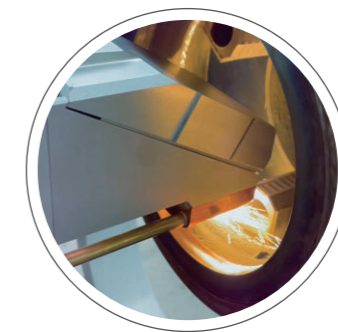
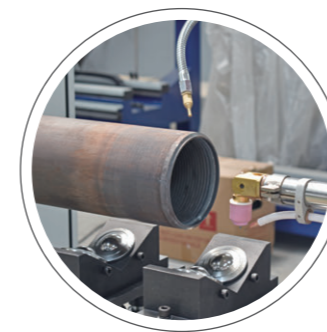
- 焊枪沿轴线前后位移焊接，工件旋转，焊接位置水平。
- 工件由动力头驱动旋转，端面定位，旋转焊接。
- 专机具有高电压，慢送丝引弧功能，保证引弧可靠，以及低电压，小电流收弧，填满弧坑功能。
- 采用推丝式送丝方式，保证送丝稳定性。
- 焊枪沿纵向可调，适应多品种焊接。
- 采用PLC机控制整机运行，工件旋转采用交流变频调速，无级可调，提高设备可靠性。
- 焊接形式，焊接规范可预设，存储和调用。通过触摸式人机界面可以方便地更改参数和状态转换。
- The welding gun moves forward and backward along the axis for welding, the workpiece rotates, and the welding position is horizontal.
- The workpiece is driven to rotate by a power head, positioned by end face and welded while rotating.
- The machine has high-voltage and slow wire feeding arc performance, which guarantees reliable arc ignition; as well as low-voltage and small-current arc ending for filling crater.
- Push-wire is used as feeding mode, guarantees feeding stability.
- The welding gun can be adjusted longitudinally to adapt to various types of welding.
- PLC is used to control the whole machine to work. The rotating speed of the workpiece is regulated by AC variable-frequency speed inverter stepless, which improves the machine reliability.
- The welding mode and welding specification can be preset, memorized and called. By touch human-machine interface, parameters can be easily modified and status converted.

## 内孔激光熔覆专机

### Inner Hole Laser Cladding Machine

主要用于工件内表面的激光熔覆焊接，改变工件表面性能，修复工件，增强其耐用性、节省成本。

Mainly used for laser cladding welding of the inner surface of workpieces, changing the surface properties, repairing workpieces, enhancing their durability, and saving costs.



# 焊接修复专机

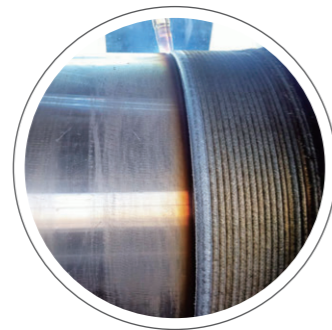
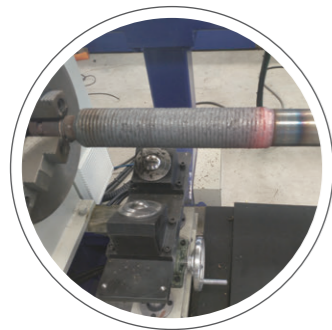
Repair Welding/Overlay  
Welding/Cladding Equipment

## 外圆堆焊专机

Outer/Externer Overlay Welding Machine

主要用于多种材质圆筒形工件表面的外圆堆覆焊接，工件耐用性高，经济性强。

Mainly used for outer circle overlay welding on the surface of cylindrical workpieces made of various materials. The workpiece is highly durable and economical.



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## 外圆熔覆专机

Outside/External cladding  
machine

主要用于多种材质圆筒形工件表面的激光熔覆焊接，工件耐用性高，经济性强。

Mainly used for laser cladding welding on the surface of cylindrical workpieces made of various materials. The workpiece is highly durable and economical.

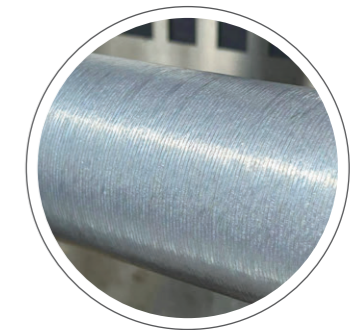
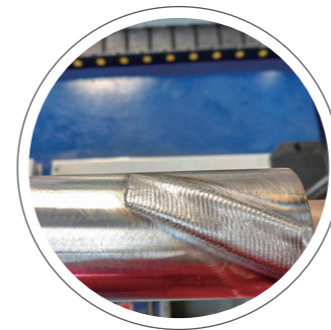
## 外圆激光熔覆专机

External Laser  
Cladding Machine



## 等离子熔覆专机

Plasma Powder  
Automatic Cladding  
Machine

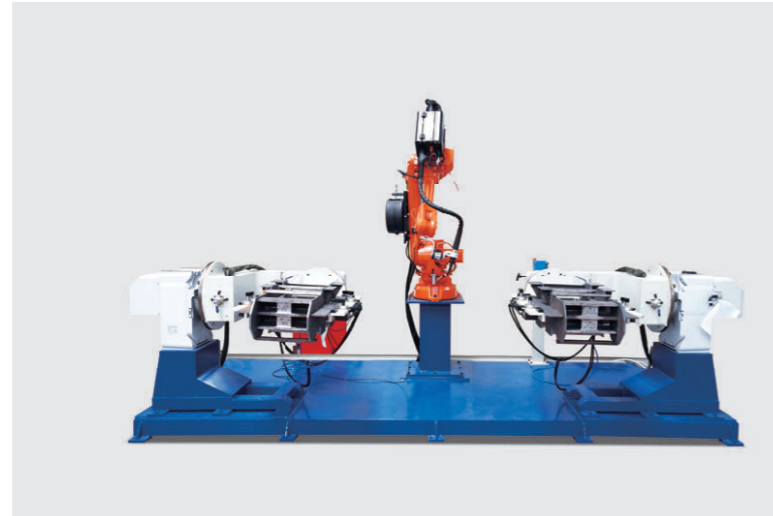


## 机器人双工位工作站

Robot Double Position Welding Station

双工位四外部轴  
焊接机器人工作站

Double Position Four  
External Axis Robot  
Welding Station



转向机机器人焊接工作站

Steering Gear Robot  
Welding Station



双工位六外部轴焊接  
机器人工作站

Double Position Six External  
Axis Robot Welding Station



## 机器人单工位工作站

Robot Single Position  
Welding Station

单工位双外部轴焊接  
机器人工作站

Single Position Double  
External Axis Robot  
Welding Station



减振器机器人工作站

Shock Absorber Robot  
Welding Workstation



相贯线机器人焊接工作站

Pipe Intersecting Line Robot  
Welding Machine



### 焊接工作站

#### Welding Workstation

配有2个焊接工作台，机器人在A工作台焊接时，工人可在B工作台上工作。机器人完成其中一个工作台的焊接任务后，旋转180度到另外一个焊接工位继续焊接，两个焊接工作台协同工作提高生产效率。

Equipped with 2 welding workbenches. When the robot is welding on workbench A, the worker can unload the workpiece from workbench B. After finishing welding on one of the workstations, the robot rotates 180 degrees to go on welding at the other workstation. The two welding workstations work together to improve production efficiency.



### 旋转机器人

#### Rotating Robot

该台焊接机器人用于油缸环缝自动焊接，采用双工位单机器人单外部轴焊接工作站结构，所有焊接实现机械自动化，减少人工操作，增强效率，降低劳动强度。

Used for automatic welding of hydraulic cylinder circular seams. Double-position single-robot single-external-axis welding station is adopted. All welding is mechanically automated, reducing manual operation, enhancing efficiency, and reducing labor intensity.

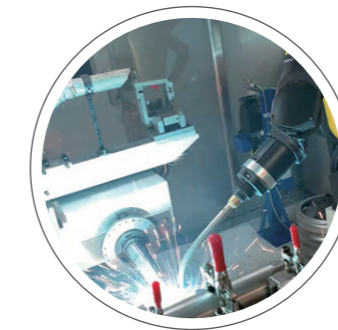
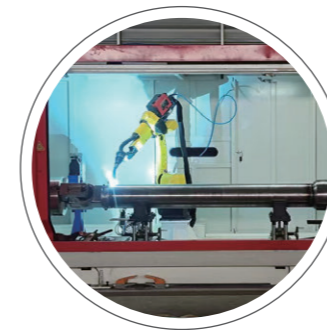


### 搬运工作站

#### Handling Workstation

通过机器人配合焊接站进行工件的搬运，上下工件，节省人力。

The robot is used to convey the workpiece, load and unload the workpiece in conjunction with welding stations, saving manpower.



工件  
Welded Workpieces



场景  
Welding Spots

