FAIRINO

WELDING PRODUCT
BROCHURE

Collaborative Robot Popularizer Pioneer of New Application Scenarios
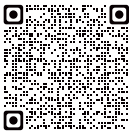
CONTENTS

FAIRINO

FAIRINO ROBOT

PRODUCT VISION

FAIRINO always takes customer needs as the core, creating a new welding ecosystem of **"human-machine collaboration, precision and efficiency"** . We not only provide products, but also offer future oriented industrial value - through modular design, flexible welding, and full lifecycle services, we reduce customers' overall costs and enhance the competitiveness of the industrial chain.

We look forward to working together with global partners to connect innovative technologies and industrial scenarios through welding, and jointly write a new chapter in intelligent manufacturing.

WELDING PRODUCT DISPLAY

HIGH SECURITY

EASY OPERATION

MODULARIZATION

QUICK DEPLOYMENT

| CERTIFICATE TYPE	CERTIFICATION BODY	CERTIFICATION OVERVIEW
CR	TILVA	China Robot Certification (CRC)
CE Industrial	SGS	Safety Certification Mark
Functional Safety ENJS0 13849-1	SGS	Functional Safety Assessment Certification
North America NRTL	SGS	North America Market Access Certification
Explosion-proof	National Supervision and Inspection Center for Explosion-proof Safety of Instrumentation	Explosion-proof Product Testing and Certification
CE Collaborative	SGS	Safety Certification Mark
Korea KCs	KC	Korea Compulsory Safety Certification (KC Mark)
RoHS	SGS	European Union Electrical Industry Standards
Collision Force Test	SGS	ISO/TS 15066 Standard Certification
ISO9001	IAF、CNAS	ISO 9001 Standard Certification

FR3WMS   **FR3WML**   **FR3**   **FR5**   **FR10**

ROBOT BODY INTRODUCTION

1. ROBOT MODEL – FR3WMS、FR3WML

FR3WMS

Payload（kg）	3kg
Weight（kg）	**10.5kg**
Reach（mm）	622mm
Degrees of freedom	6
End-effector Rotation Angle	±360°
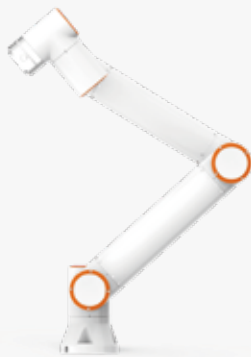
FR3WML

Payload（kg）	3kg
Weight（kg）	**11kg**
Reach（mm）	922mm
Degrees of freedom	6
End-effector Rotation Angle	±360°

PRODUCT FEATURES

Lightweight Design

The FR3WMS weighs only 10.5 kg, and the FR3WML weighs 11 kg. The lightweight design allows for easy transportation by a single person, enabling quick deployment to different work areas and improving work efficiency.

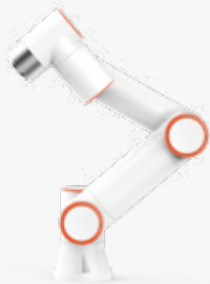**Flexible End-Effector Control**

The end-effector features 360° rotation, allowing it to reach the workpiece at any angle, significantly improving work precision and flexibility.

Efficient and Versatile

With its compact size and high flexibility, it is suitable for various complex working environments.

2. ROBOT MODEL – FR3、FR5

FR3

Payload（kg）	Rated Load 3kg, Maximum Load 5kg
Weight（kg）	15kg
Reach（mm）	622mm
Degrees of freedom	6
End-effector Rotation Angle	±175°

FR5

Payload（kg）	Rated Load 5kg, Maximum Load 7kg
Weight（kg）	22kg
Reach（mm）	922mm
Degrees of freedom	6
End-effector Rotation Angle	±175°

PRODUCT FEATURES

Quick Deployment

Simple to deploy and easy to drag, it requires no complex training. Operators can get started in just 2 minutes.

Easy Operation

A single worker can operate 3-4 units simultaneously, significantly reducing labor costs.

Flexible Response to Demands

It can be quickly moved and deployed, enabling flexible operations and efficiently meeting various production needs.

Applicable welding scenarios for FR3WMS、FR3WML、FR3 and FR5

MECHANICAL MANUFACTURING　　SHIPBUILDING　　METAL PROCESSING　　ELECTRONIC PRODUCT MANUFACTURING　　AUTOMOTIVE PARTS PRODUCTION

FAIRINO

3. ROBOT MODEL – FR10

FR10

FR10

Payload（kg）	Rated Load 10kg, Maximum Load 14kg
Weight（kg）	40kg
Reach（mm）	1400mm
Degrees of freedom	6
End-effector Rotation Angle	±175°

PRODUCT FEATURES

Wider Working Range

With an arm span of up to 1.4 meters, it meets industrial welding robot standards, significantly expanding the working coverage area.

Efficient Multi-Station Welding

It can easily operate across different workstations, enabling continuous and efficient welding operations, significantly enhancing production line automation and efficiency.

Safe and Efficient

It can share workspace with humans without additional safety barriers, supporting drag-and-teach and graphical programming, greatly lowering the operational threshold and improving work efficiency.

APPLICABLE SCENARIOS

Mobile welding
· Shipbuilding
· Bridge Construction
· Building Steel Structure

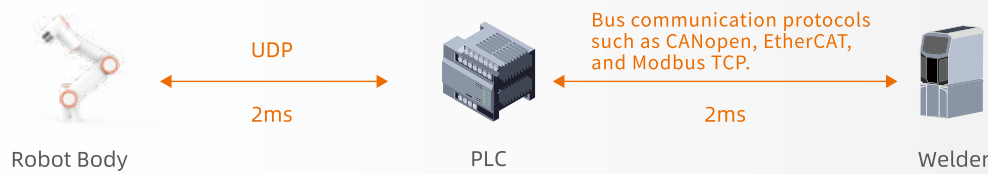**Multi-variety and low-volume welding**
· Automotive Manufacturing
· Aerospace

High-precision welding
· Metal Furniture Manufacturing
· Hardware Products Processing

▌ COMMUNICATION METHODS

1. Digital Communication

❶ Connection via PLC

Robot Body — UDP 2ms — PLC — Bus communication protocols such as CANopen, EtherCAT, and Modbus TCP. 2ms — Welder
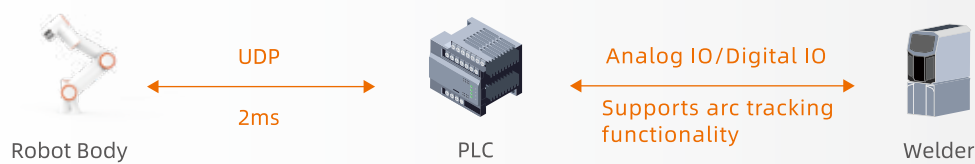
❷ Direct Connection

Robot Body — ModbusTCP — Welder

Supports digital communication protocols such as CANopen, EtherCAT, and Modbus TCP, and can connect to welding machines with various industrial Ethernet and fieldbus interfaces.

2. Analog Communication

❶ Connection via PLC

Robot Body — UDP 2ms — PLC — Analog IO/Digital IO, Supports arc tracking functionality — Welder

❷ Direct Connection

Robot Body — Analog IO/Digital IO — Welder

Features analog communication with analog I/O and digital I/O communication capabilities, enabling one-click configuration between the welding machine and the robot.

WELDING FUNCTIONS

1. Welding Process Package

FAIRINO's independently developed welding process package supports various welding techniques, including arc welding, corner welding, flat welding, segment welding, and dual-process welding.

Scan the QR Code to Watch the Welding Process Video

2. Key Welding Functions

01. WEAVING WELDING

▶ FEATURE INTRODUCTION

FAIRINO's robot weaving function supports various weaving patterns, including triangular wave, vertical L-shape, triangle, circular, inclined sawtooth, and sine wave weaving.

Weaving patterns

Triangular Wave Weaving	Vertical L-Shape Weaving	Triangle Weaving	Circular Weaving	Inclined Sawtooth Weaving	Sine Wave Weaving

Command Interface Display

Command Code
Command Editing
Weaving Command

Command Editing
Weaving Command

Overview of the wave instruction code

Wave Instruction-Start Track Warning

02. ARC TRACKING

▶ FEATURE INTRODUCTION

Arc Tracking Diagram

Arc tracking is a key technology in welding automation, when welding right-angle, U-shaped, V-shaped and other grooves, the position relationship between the welding gun and the groove center is calculated according to the welding current and voltage information after arcing, and the weld deviation is compensated in real time to ensure that the weld position is accurate and the welding quality is stable.

ARC TRACKING
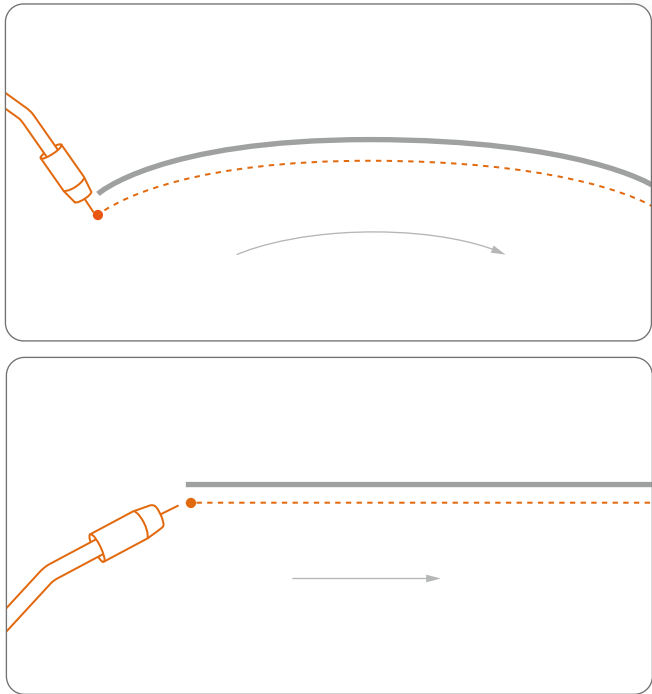
Command Interface Display

Command Editing
Arc Tracking Command

Command Editing
Arc Tracking Command

Arc Tracking Vertical Compensation (Start)

Arc Tracking Horizontal Compensation (End)

03. SEAM TRACKING

▶ FEATURE INTRODUCTION

Seam tracking refers to detecting changes in the welding wire's electrical signal upon contact with the workpiece surface to determine the workpiece's actual position within the robot's coordinate system. After teaching the position-sensing waypoints, the robot automatically searches for the workpiece surface boundary. When the welding wire touches the workpiece surface, a voltage signal change occurs, which the welding machine communicates back to the robot. Upon receiving the signal, the robot records the workpiece surface boundary position.

Seam Tracking Diagram

Command Interface Display

Wire Seam Tracking Command
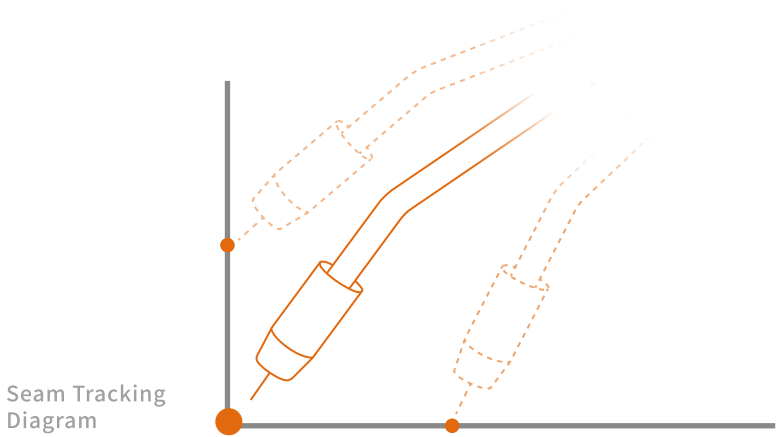
Command Code
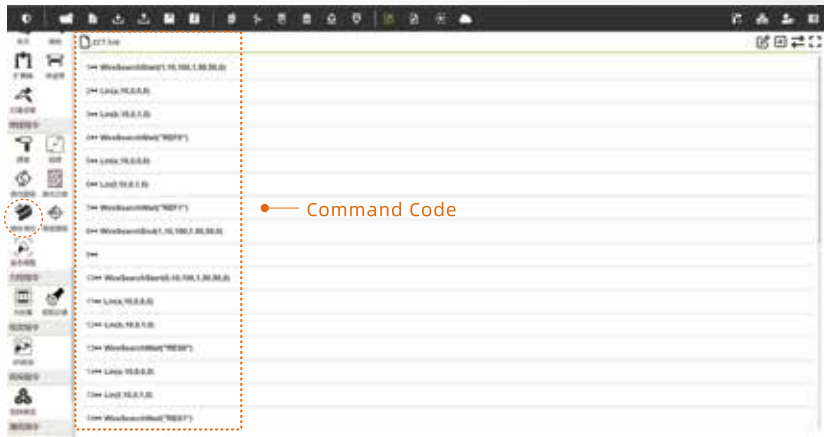
Wire Sensing - Sample Code Interface Display

04. WELDING INTERRUPTION RECOVERY

▶ FEATURE INTRODUCTION

The welding interruption recovery function is used when the welding is interrupted due to the operator's active interruption of welding during the welding process, or encounters unexpected circumstances such as collision and arc breakage, the robot can start the arc again from the original welding interruption position and continue to complete the subsequent welding tasks. When the arc is restarted, the robot will automatically retreat a specified distance along the welding direction to create a lap with the weld before the arc stops to ensure the welding quality.

Welding Interruption Recovery Diagram

Interruption Recovery

Collision Recovery

Command Interface Display

Welding Interruption Recovery Command Setting
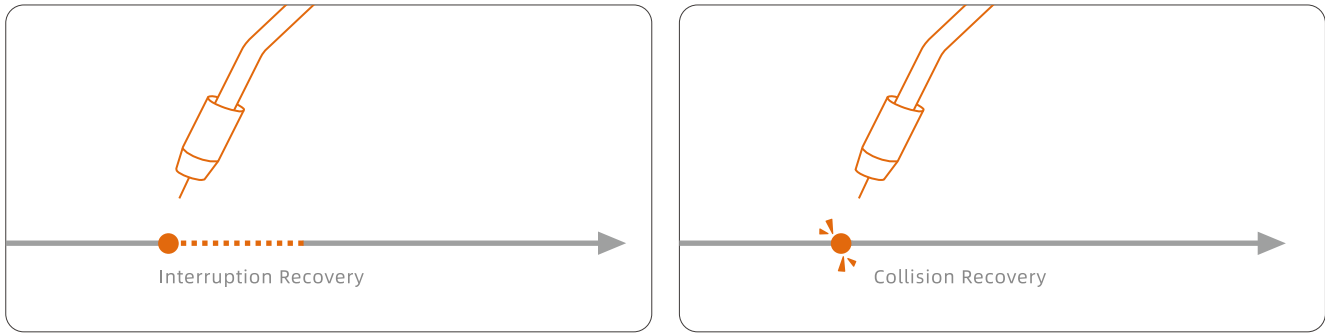
3. AIR LAB AND SECONDARY DEVELOPMENT

(Innovatively Enables Welding Operations Without Teaching or Programming)

The **FAIRINO** AIR Lab laboratory uses advanced visual and motion algorithms to enable collaborative robots to have stronger autonomous learning and decision-making capabilities, enhancing the human-machine experience.

▶ OPEN PLATFORM

The **FAIRINO** AIR Lab supports a variety of programming languages, including **C , C#, Python, ROS, TCP/IP**, providing a rich selection for developers different technical backgrounds. Users can develop secondary applications to expand the robot's application functions based on their needs.

C++	C#	Python
Java	TCP/IP	ROS

① Welding Torch

② 3D Camera

③ Robot Body

AIR LAB

Advantage

● Equipped with powerful automatic seam recognition capabilities, using point cloud algorithms to achieve automatic seam recognition with or without models.

● No teaching or programming required, capable of predicting welding challenges in advance, eliminating the need for manual modeling, and improving welding preparation efficiency.

▶ SCOPE OF APPLICATION

■ Applicable Scenarios

Suitable for production scenarios with multiple varieties and small batches, meeting diverse production needs.

AIR Lab Key Features Animated Diagram

4. PERIPHERAL APPLICATIONS

Types of Peripheral Applications

01.Traveling Axis

LMF-50

LMF-200

Product model	LMF-50 / LMF-200	
Core parameters		
Model	LMF-50	LMF-200
Dynamic Load Weight（kg）	≤100	≤200
Static Load Weight（kg）	≤200	≤500
Maximum Speed（m min-1）	90~120	90~120
Maximum Acceleration（m /s²）	1~3	1~3
Highest Precision（mm）	±0.02	±0.02

*Multi-Axis Welding Travel Axis, Specific Parameters Can Be Customized

Product Advantages

·High speed and low noise;
·Replacement of accessories is more convenient and has strong environmental adaptability;
·Optimize the cost and efficiency of welding operations to achieve flexible automation of robot welding.

02.Torque sensor

Product model	FR-6F-75MM		
Core parameters			
Fx,Fy(N)	100	Overload Level（%）	200
Fz(N)	100	Protection Rating (IP Rating)	IP64
Mx,My(Nm)	5	Operating Temperature（℃）	-20~80
Mz(Nm)	5	Sampling Frequency（HZ）	1000
Diameter（mm）	75	Cable Length（m）	0.25（Customizable）
Height（mm）	30.5	Supply Voltage（VDC）	12~24
Resolution（%FS）	0.1	Communication Method	RS485/ Industrial Ethernet, etc.
Repeatability Accuracy（%FS）	0.2		
Overall Accuracy（%FS）	≤1	Weight	0.2kg(Including Cable)
Zero-Point Temperature Drift（%FS/10℃）	0.3	Material	Aluminum Alloy

Product Advantages

·Based on precise feedback from force sensors, FAIRINO robots can achieve accurate control, perfectly handling both delicate welding points and complex welding paths;

·They can be flexibly combined with various equipment such as extension axes and positioners to meet the needs of different industrial scenarios;

·When working in human-robot collaboration or complex environments, the force sensors can monitor external forces in real time, guiding the robot to stop or adjust its movements promptly to avoid damage to personnel, equipment, and products

03.Lightweight Push-pull Welding Torch

Push-pull welding torch (standard model)

Product model	FR-WPPL01		
Core parameters			
Welding current	0A~500A	Wire feeding speed	0~25m/min
Motor type	DC brushed motor	Operating temperature range	0~45℃
Motor voltage	24V DC	Weight	≤1.1kg
Wire feeding mechanism	Single drive	Dimensions	207*46*62mm(Without gooseneck)
Wire feeding distance	20m	Wire feeding diameter	Φ 1.2mm

Operation Video

Push-pull welding torch
(optional model)

PRODUCT ADVANTAGES

• 1.Ultra-long wire feeding

The wire feeding hose can be extended to about 20 meters to expand the welding operation range and meet the welding needs of large structural components.

• 2.Goose-neck quick change

Gooseneck replacement is extremely convenient, easy to operate, and does not require complex tools or professional skills to quickly complete the replacement, improving work efficiency and reducing maintenance costs.

• 3.Stable wire feeding

The dual driving mechanism of wire pushing and drawing is integrated to effectively overcome the resistance during the wire feeding process, ensuring that the welding wire is evenly and stably delivered to the welding area, significantly improving the stability of wire feeding.

• 4.Lightweight design

The product is compact in size, weighing ≤ 1.1kg, lightweight and convenient, and can be flexibly operated in any space.

• 5.Wide range of applications

Widely applicable to welding scenarios such as ships, bridge construction, steel structures with long distances and narrow spaces, as well as dust and oil pollution environments such as mechanical processing and manufacturing, automobile maintenance, etc.

Lightweight Push-Pull Welding Torch User Guide

❶ Pre-Operation Preparation

·**Welding Torch Installation:**Connect the torch to the welding cable and set key parameters such as current, voltage, and gas flow rate on the welding machine according to welding requirements.

·**Proper Wire Installation:**Install the welding wire correctly into the torch's wire feeding mechanism. During wire feeding, use a wrench to open the pressure roller, feed the wire through, then release the wrench to continue feeding.

❷ Welding Operation

·**Arc Ignition:**Align the torch nozzle with the welding area and power on to ignite the arc. Control the arc length and welding speed during ignition.

·**Welding Process:**Maintain stable torch movement during welding to ensure the arc evenly melts the workpiece and welding wire, forming a high-quality weld seam.

·**Arc Termination:**When welding is complete or needs to be paused, gradually reduce the current and voltage to allow the arc to extinguish smoothly. Ensure the crater is filled to prevent crater cracks.

❸ Post-Welding Maintenance

Turn off the equipment and clean it promptly. Remove spatter and oxides from the torch nozzle in a timely manner.
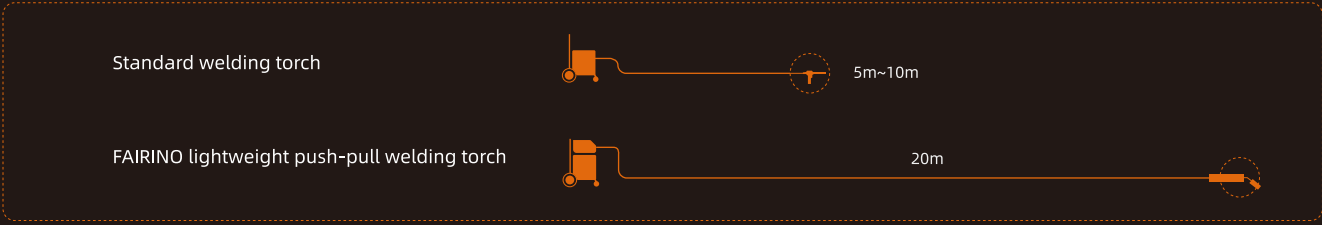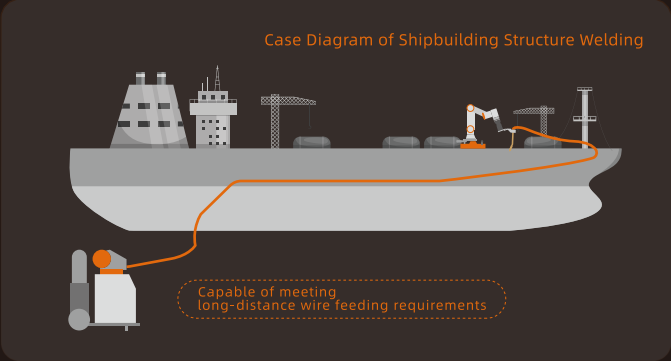
APPLICATION SCENARIOS

1. Shipbuilding Structural Welding

Case Diagram of Shipbuilding Structure Welding

Capable of meeting long-distance wire feeding requirements

Challenges in the Operation

The hull of the ship is spliced by a large number of steel plates, which requires a large amount of welding work, long-distance operation, and extremely high requirements for weld strength and tightness.

Standard Welding Torch VS FAIRINO Lightweight Push-Pull Welding Torch

• Standard welding torches often experience unstable wire feeding or even clogging during long-distance wire feeding, resulting in uneven weld quality and reduced welding efficiency.

• FAIRINO lightweight push-pull welding torch, on the other hand, is designed to meet the demands of long-distance wire feeding. It ensures stable wire feeding across various welding positions, such as flat, vertical, and overhead welding on ship hulls, significantly improving welding efficiency.

Standard welding torch — 5m~10m

FAIRINO lightweight push-pull welding torch — 20m

2. Steel Structure Welding

Schematic Diagram of Steel Structure Welding Path

High welding quality

Uniform and stable wire feeding

Challenges in the Operation

Many steel structure welding faces the challenges of outdoor work, narrow space work and other working environments, the construction conditions are poor, the operation difficulty is large and the stability of the welding wire feeding of the welding gun is put forward with extremely high requirements.

Standard Welding Torch VS FAIRINO Lightweight Push-Pull Welding Torch

• Conventional welding torches often experience issues such as poor wire feeding, leading to weld defects like porosity and slag inclusion, which compromise weld strength and appearance.

• FAIRINO lightweight push-pull welding torch ensures uniform and stable wire feeding, effectively guaranteeing welding quality.

Standard welding torch — Poor wire feeding

FAIRINO lightweight push-pull welding torch — Uniform and stable wire feeding
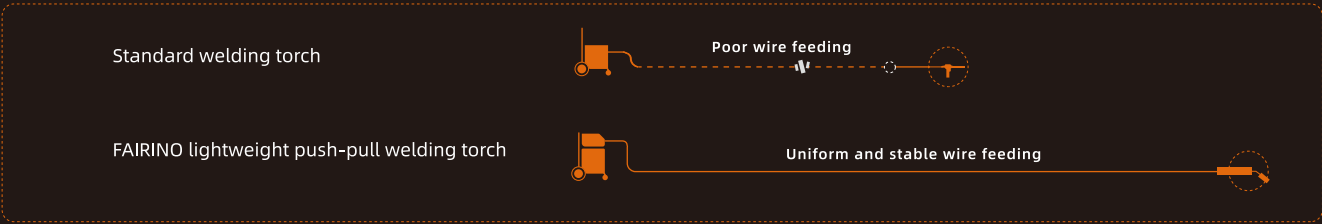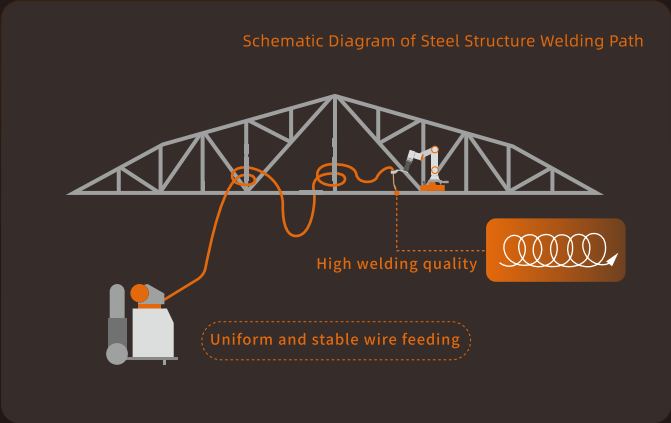
04.Smart Tool

Core parameters

Specifications	130mm*Φ80mm
Weight	300g
IP Rating	IP54
Operating Environment	Temperature 5~40℃, Humidity below 85% RH

Operation Video

Product Advantages

· Quick point recording, significantly improving welding efficiency;
· Supports custom button configuration;
· Eliminate the need for a teach pendant, welding can start in just 3 seconds, and workers can master the operation skills in 5 minutes, greatly shortening training and operation time.

SMART TOOL USER GUIDE

❶ Pre-Operation Preparation

Properly install the smart tool onto the robot's end effector, ensuring a secure connection.

❷ Parameter Configuration

Access the parameter settings interface of the smart tool through FAIRINO Robotics' programming software or teach pendant to configure key parameters.

❸ Operation Execution

During formal operation, the robot will perform welding tasks according to the program input by the smart tool

APPLICABLE SCENARIOS

3C electronic product manufacturing, building steel structure, shipbuilding, sheet metal industry, auto parts production.

Challenges in the Operation

In the field of multi-variety, small-batch welding, non-standard steel structures and non-standard workpieces present numerous challenges. These include complex workpiece characteristics, significant differences in specifications, materials, and shapes, requiring frequent adjustments to welding processes and parameters, which increases operational difficulty.

Conventional Welding Tool VS FAIRINO Smart Tool

Conventional Welding Tool: Limited functionality and reliance on manual experience for parameter adjustments. Inability to ensure welding precision, leading to inconsistent product quality and low production efficiency.

VS

FAIRINO Smart Tool: High automation level, low learning curve, and quick setup. Combined with the robot's high-precision motion control, it enables fast and accurate welding of non-standard steel structures and workpieces. Significantly improves production efficiency and welding yield.

05.Camera

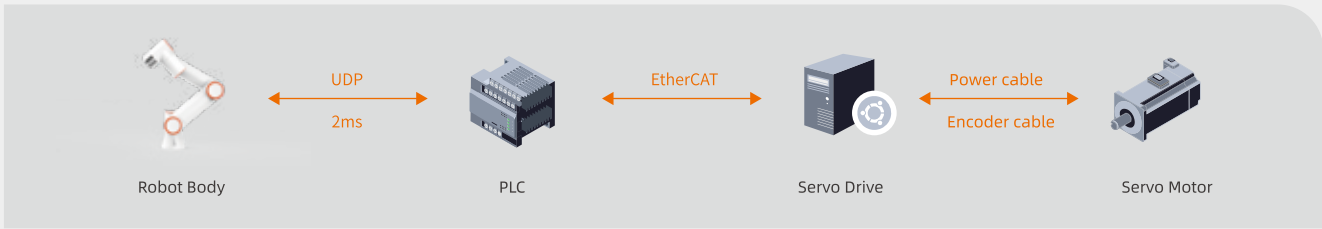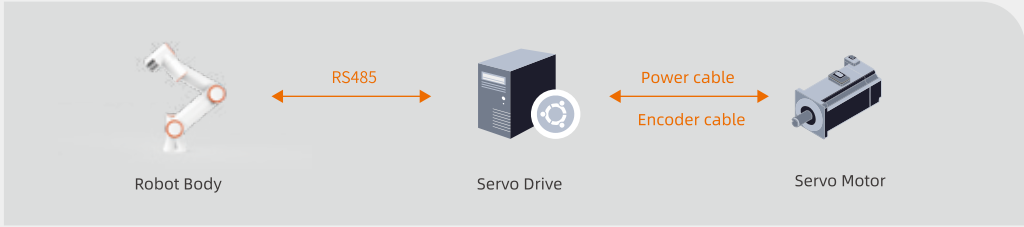| Product model	Nano
Core parameters	
Field of View	FOV:52°*50° (H*V)
Field of View	329mmx287mm@350mm
Far Field	1021mmx881mm@1100mm
Working Range	350mm~1100mm (Subject to change depending on the environment)
Point Cloud Specifications;Accuracy	1280 x 1024；<0.05%@1100mm
Frame Rate; Operating Current; Data Interface	<3 Hz；1A；GigE
Supported Modes	External Power Supply:12V~24V POE
Trigger Method	Software Trigger / Hardware Trigger
Data Types	Raw Image (Grayscale), Depth, Point Cloud
Supported Operating Systems	Windows / Ubuntu
Operating Temperature	Operating Temperature: -10℃ to 70℃, Recommended Range: 0℃ to 50℃
Weight; Safety	482g；LaserClass3R
Product Dimensions	136.5 x 60.5 x 45.1mm (Excluding motorized protective cover)

Product Advantages

·Achieves high-precision measurement, providing accurate positional data for robots.

·Quickly captures environmental and object changes, delivering real-time information to the robot control system for operational adjustments.

·Compact size, lightweight, and high structural strength, with fast imaging speed and high accuracy. Particularly suitable for high-temperature environments, featuring high-temperature resistance. Equipped with a front splash-proof cover to effectively reduce the impact of welding spatter on the camera.

Communication Method

❶ Option 1：UDP

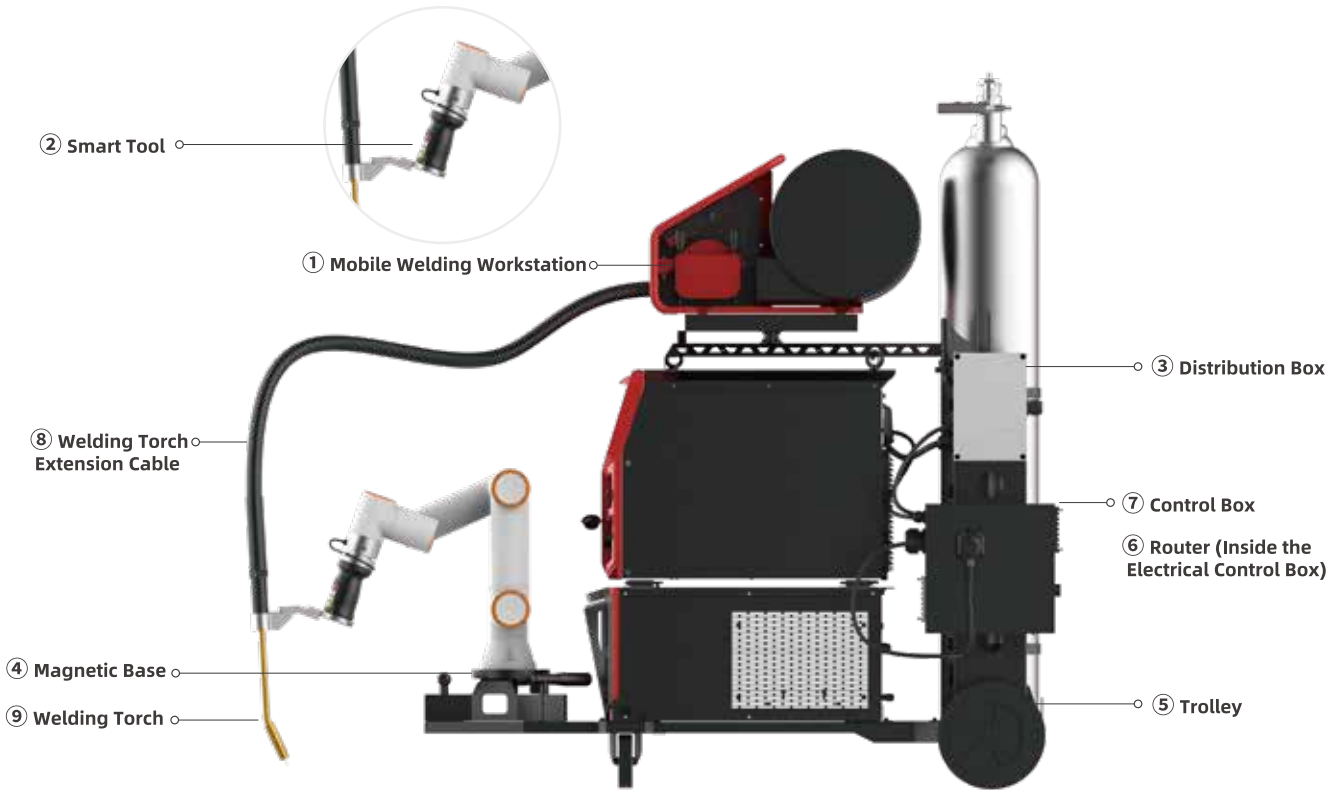| Robot Body	UDP 2ms	PLC	EtherCAT	Servo Drive	Power cable / Encoder cable	Servo Motor

❷ Option 2：RS485

Robot Body	RS485	Servo Drive	Power cable / Encoder cable	Servo Motor

MOBILE WELDING SOLUTION

The mobile welding solution integrates core equipment units such as mobile trolley, magnetic base, SMART TOOl, and six-dimensional torque sensor, and each equipment unit works together to give full play to its respective advantages and bring a new experience to welding work.

② Smart Tool

① Mobile Welding Workstation

③ Distribution Box

⑧ Welding Torch Extension Cable

⑦ Control Box

⑥ Router (Inside the Electrical Control Box)

④ Magnetic Base

⑤ Trolley

⑨ Welding Torch

APPLICATION ADVANTAGES

High Flexibility

Capable of moving freely in various complex work scenarios. The magnetic base design breaks the limitations of traditional welding equipment, enabling multi-angle and omnidirectional welding.

Precision Control

The six-dimensional force sensor and smart welding torch work in tandem to achieve precise welding control, significantly improving consistency and stability in welding quality while reducing defect rates.

Easy Operation

Operators do not need extensive welding expertise. Simply set the welding tasks and parameters, and the device will automatically complete the welding process.

Improved Efficiency

The highly integrated design reduces installation and debugging time, greatly enhancing work efficiency and shortening the welding cycle.

APPLICABLE SCENARIOS

It is suitable for large workpieces or equipment that is difficult to move, requiring flexibility in handling different welding positions and environmental conditions. This includes industries such as shipbuilding, bridge construction, petrochemical facilities, heavy machinery manufacturing, hardware manufacturing, metal processing, and many other fields.

3D Vision Programming-Free Welding Solution

The 3D Vision Programming-Free Welding Solution integrates FAIRINO Robotics, 3D cameras, and the FAIRINO AIR Lab, leveraging a programming-free automatic welding platform to establish an efficient, intelligent, and flexible welding system. Equipped with a 3D camera and offline simulation capabilities, this solution utilizes powerful scanning and recognition functions to achieve automatic workpiece positioning, weld seam recognition, and weld path analysis and planning, ensuring consistency and accuracy in welding operations.

APPLICATION ADVANTAGES

Anticipate Challenges

Provides a simulation environment that fully replicates actual welding conditions, allowing for early identification of potential welding challenges.

Rapid Deployment

Equipped with a comprehensive welding process database. Simply select the appropriate process based on the actual workpiece type to achieve rapid deployment, significantly shortening project cycles.

Precision Recognition

3D vision guidance technology accurately measures the three-dimensional shape and position of welding workpieces, offering precise welding path planning and tracking for robots. This greatly enhances welding accuracy and efficiency while reducing the time required for manual intervention and adjustments.

APPLICABLE SCENARIOS

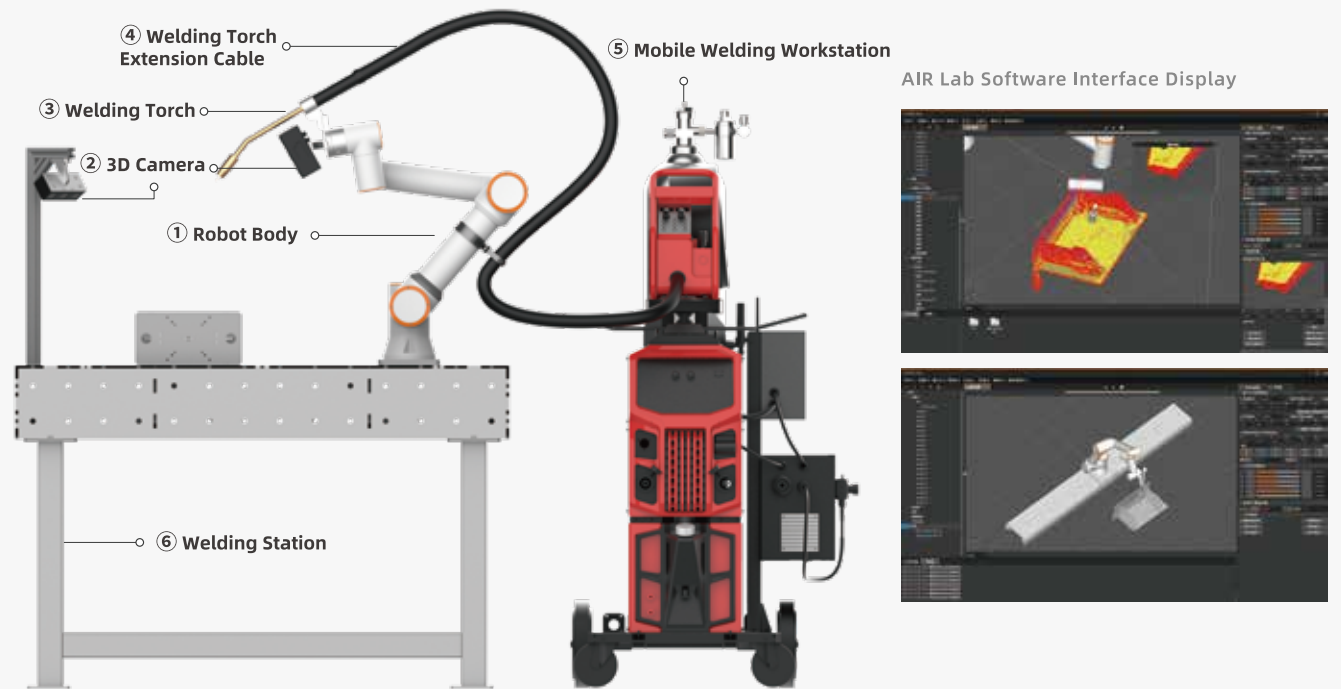Suitable for precision welding tasks in complex spatial structures.

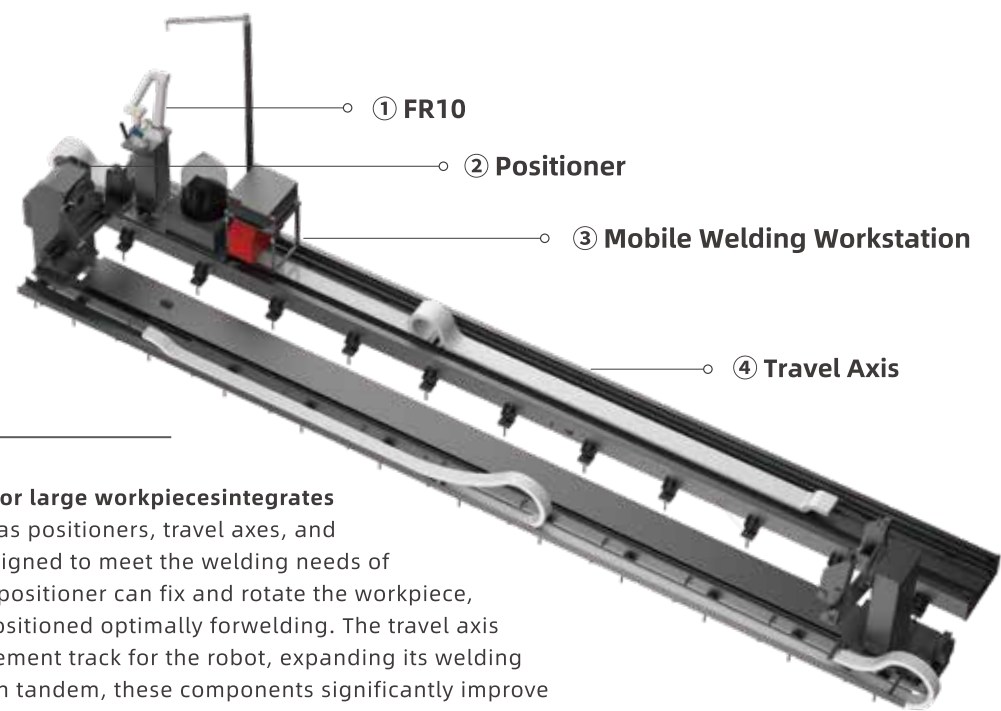| Building Steel Structure | Shipbuilding | Sheet Metal Industry | Electronics manufacturing | Production of auto parts |

④ Welding Torch Extension Cable

⑤ Mobile Welding Workstation

③ Welding Torch

AIR Lab Software Interface Display

② 3D Camera

① Robot Body

⑥ Welding Station

LARGE WORKPIECE WELDING SOLUTION

① FR10

② Positioner

③ Mobile Welding Workstation

④ Travel Axis

The welding solution for large workpiecesintegrates equipment units such as positioners, travel axes, and robots, specifically designed to meet the welding needs of large workpieces. The positioner can fix and rotate the workpiece, ensuring the weld is positioned optimally forwelding. The travel axis provides a linear movement track for the robot, expanding its welding range. When working in tandem, these components significantly improve welding quality, enhance work efficiency, and increase adaptability to different large workpieces.

APPLICATION ADVANTAGES

Expanded Work Range

Applicable to large workpiece welding, widely used in industries such as heavy machinery manufacturing, automotive production, aerospace, and energy equipment.

Increased Production Efficiency

Optimizes the robot's motion paths and processes to achieve continuous production, thereby improving production efficiency.

Improved Welding Quality

Ensures stability during the robot's movement, enhancing welding quality.

Enhanced Operational Flexibility

Supports multi-position and multi-process continuous operations, adapting to a wide range of large workpiece welding needs.

APPLICABLE SCENARIOS

It is suitable for the welding of large structural parts, including bridges, steel structures, shipbuilding, large machinery and other industries.

FLEXIBLE WELDING SOLUTION FOR SMALL-BATCH PRODUCTION OF MULTIPLE VARIETIES

The flexible welding solution for small-batch production of multiple varieties is specifically designed to meet the flexible production needs of modern manufacturing. It features a modular fixed platform design, deeply integrating intelligent sensing and adaptive control technologies. This enables rapid programming and reuse of welding procedures, ensuring stable mass production while overcoming the limitations of traditional welding equipment, which often requires excessive consistency in workpieces.

① Mobile Welding Workstation

② Global Camera

③ Welding Torch Extension Cable

④ Smart Tool

⑤ Welding Torch

⑥ Welding Station

APPLICATION ADVANTAGES

Flexibility and Efficiency

Easily meets the demands of frequent product changes in multi-variety, small-batch production.

Improved Production Efficiency

Significantly enhances production efficiency and effectively controls production costs.

Enhanced Welding Quality

The robot maintains precise positioning during operations, ensuring consistency and aesthetic quality of weld seams.

APPLICABLE SCENARIOS

It is suitable for multi-variety and low-volume welding scenarios, such as sheet metal processing and manufacturing industries, including the production of various chassis cabinets, electrical control cabinets, etc.

SHIP WELDING

In shipbuilding welding, most structural components are fixed in place, and the space is narrow, making welding extremely challenging. FAIRINO's welding solution has a compact footprint, allowing for mobile, on-the-go welding. The magnetic base design can be directly attached to the welding workpiece for immediate use—just set up and start welding.

Scan the code to watch case videos

- Shipbuilding involves large volumes and immense welding workload. FAIRINO's welding solution, with its fast mobility, greatly enhances welding efficiency. Combined with its quick programming function, it allows for rapid adjustment of parameters for different welding tasks, effectively shortening project timelines.

- FAIRINO welding solution enables precise parameter settings through rapid programming, ensuring stability and consistency throughout the welding process. This reduces welding defects caused by parameter deviations.

- With the characteristics of fast programming, it can quickly adapt to various complex process needs, flexibly switch welding modes and parameters, meet the diversified welding requirements of different parts of the ship, and improve the adaptability and flexibility of the welding process.

WELDING OF STEEL STRUCTURE

Steel structure construction sites are characterized by fast-paced operations, high turnover, complex environments, and stringent welding quality requirements. FAIRINO welding solution, with its high level of automation for standard components and user-friendly operation, serves as a powerful assistant to ensure smooth and efficient construction progress.

Scan the code to watch case videos
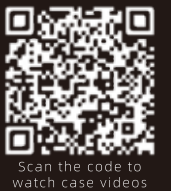
- The programming is simple, and the teaching can be dragged and dropped, so that ordinary workers with no operation experience can also get started quickly.

- With the function of automatic identification of weld position and real-time deviation compensation, the welding is formed at one time, the weld is uniform and neat, the quality is stable and reliable, and the welding defect rate is significantly reduced.

- Flexibly adapt to the welding needs of a variety of steel components, whether it is a complex special-shaped structure or a conventional standard part, the welding task can be accurately completed.

WELDING OF AUTO PARTS

Automotive component welding presents significant challenges and high requirements. FAIRINO welding solution, with its advantages of high precision, stability, and flexibility, provides an effective solution to the complexities of automotive parts welding.

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COLLABORATIVE ROBOT POPULARIZER
PIONEER OF NEW APPLICATION SCENARIOS

- High-precision welding meets the high requirements of auto parts welding, and the welding yield rate is significantly improved.

- It can easily cope with various complex welding angles and positions, increase production efficiency by 100%, and effectively shorten the project cycle.

- Equipped with arc tracking functionality, it can real-time and accurately track irregular weld seams, automatically adjust the welding position, ensuring uniformity and consistency of the welds. This effectively reduces welding defects and significantly improves the strength and sealing of weld joints, enhancing the overall quality and reliability of automotive components.