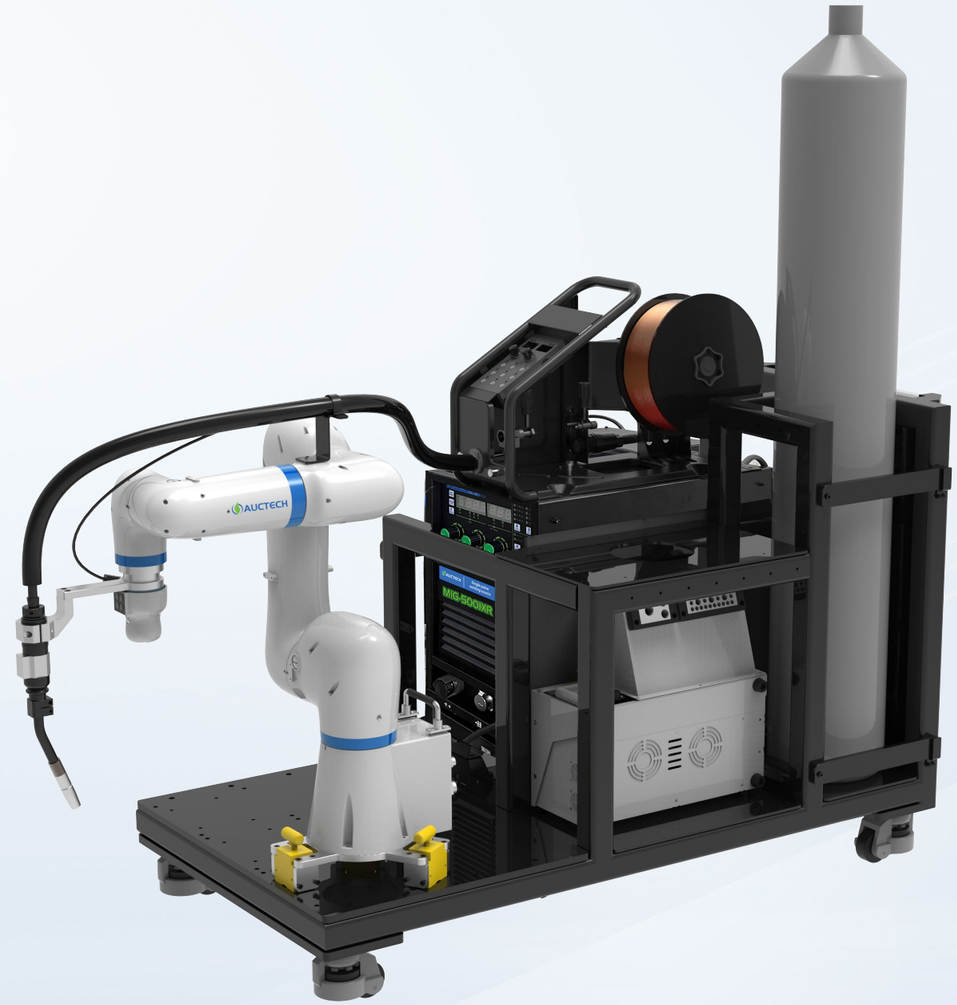
AUCTECH

AUCTECH Makes Human Life
and Manufacturing More Convenient



H Series Industrial Collaborative Welding Robot

AUCTECH Makes Human Life More Convenient

AUCTECH 2025-V2.2

AUCTECH Robotics

Tel: +86 020 8489 8493
Web: www.auctech.com.cn
Guangzhou Auctech Automation Technology Ltd

AUCTECH

To be a world-leading robot expert

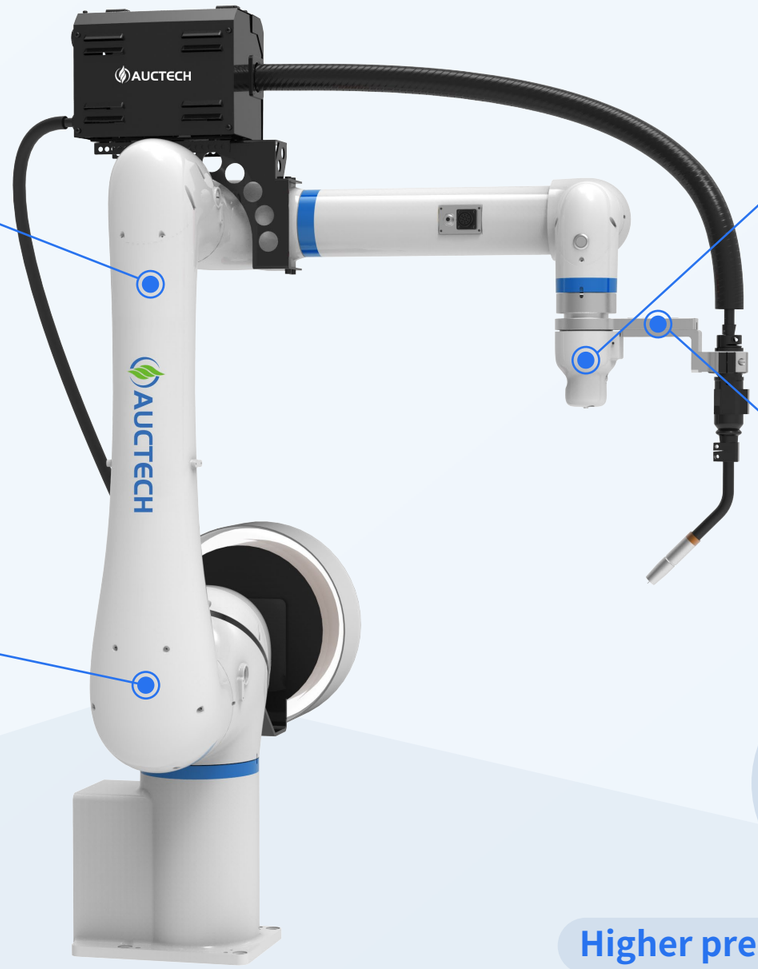
AUCTECH industrial robots are faster, more reliable, and more precise.

Every second and every motion of industrial robots matter throughout manufacturing, and that explains why robot reliability and speed come first for us.
After years of updating and improving, our products have become faster and more reliable, with more functions integrated into a compact size. That makes applications easier, production more stable, and intelligent manufacturing more efficient.

CONTENTS

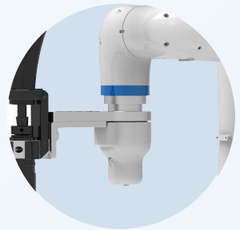
Best Welding Robot in the World!

Combining the advantages of industrial robot and cobot



Stable and reliable

IP67 and high bearing capacity

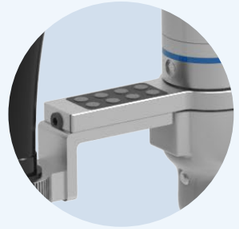


Safety and Smoothly dragging

Built-in torque sensors

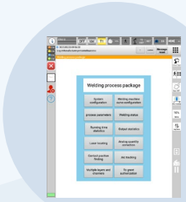
Stronger rigidity

Powerful servo and gearbox system



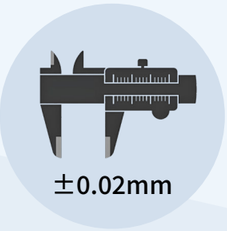
Easy teaching and operation

Professional welding keypad



More User-friendly

Professional welding firmware



Higher precision and better speed

Strong motion control algorithm

Product Introduction

Industrial Collaborative Welding Robot

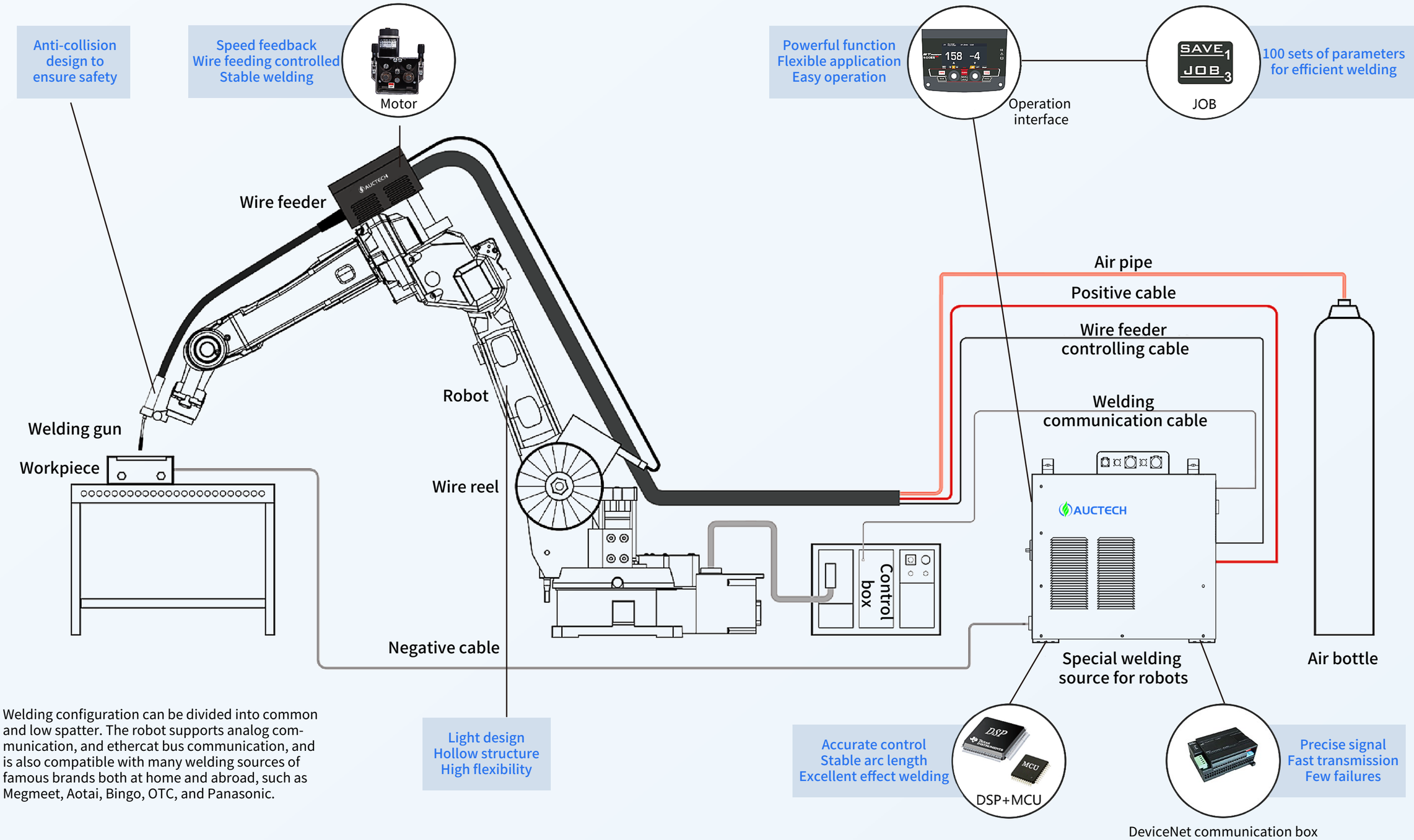
Industrial collaborative welding robot combines the crashing detection function into welding application. When the robot touches external equipment (or suffers external force), it can rapidly detect the situation and stop welding, thus increasing its security. Apply force control dragging function to welding track teaching, which simplifies the teaching procedure.

Configuration Table for Model Selection

Robot model	H5-790		H10-1500	
Payload	5kg		10kg	
Robot arm length	785mm		1455mm	
Robot weight	24kg		55kg	
Size of vision-control integrated control cabinet for robot	373mm*273mm*165mm			
Welding system	AUCTECH Welding Process Software System			
Dragging mode	Rapid dragging and accurate dragging			
Using mode	Portable	Mobile	Fixed	Mobile
Quick programming button	Yes			
Welding source	It is compatible with common arch-welding source in the market, such as Megmeet, Aotai, OTC, and Panasonic; it also supports laser welding			
Wire feeder	Manual wire feeder	Manual/Automatic welding wire feeder	Automatic welding wire feeder	Automatic welding wire feeder
Welding materials supported	Carbon steel, stainless steel, and aluminum profile			
Plate thickness	Medium-thin plate		Thick plate	
Max output current of welding source ❶	350A		500A	
Recommended mode	Low spatter		Deep penetration and pulse	
Welding source communication interface	Analog/EtherCAT			
Welding process library	Weaving welding, fish-scale welding, and multi-layer and multi-pass welding are supported			
Welding parameter library	Yes			
Cooling mode for welding gun	Air cooling		Water cooling	
Mobile trolley	Optional			
IP class	IP65			

❶ Note: 350A type only supports air cooling, 500A type with air cooling as standard, and water cooling is optional.

Product Introduction



Welding configuration can be divided into common and low spatter. The robot supports analog communication, and ethercat bus communication, and is also compatible with many welding sources of famous brands both at home and abroad, such as Megmeet, Aotai, Bingo, OTC, and Panasonic.

Product Introduction

Standard Welding Source Parameters

Model	MIG-350IXR	MIG-500IXR
Rated input voltage/frequency	Three-phase 380V±10% 50HZ	Three-phase 380V±10% 50HZ
Rated input capacity（KVA)	14.4	25
Rated input current（A)	25	37
Rated load sustainability（%)	60	60
Rated output current range(A)	20~350	20~500
Rated output voltage range(V)	17~32	17~42
Output no-load voltage(V)	98	98
Wire feeding type	Push/Push-pull	Push/Push-pull
Welding wire diameter(mm)	0.8; 1.0; 1.2	0.8; 1.0; 1.2; 1.6
Welding wire type	**Pulse characteristics:** solid carbon steel/carbon steel fiux-core; stainless steel solid/stainless steel flux-core, copper and copper alloy **Constant voltage characteristic:** CO2 carbon steel; carbon Steel; carbon steel flux-core	**Pulse characteristics:** solid carbon steel/carbon steel fiux-core; stainless steel solid/stainless steel flux-core, copper and copper alloy **Constant voltage characteristic:** CO3 carbon steel; carbon Steel; carbon steel flux-core
Cooling Mode	Air Cooling	Water Cooling/Air Cooling
Gas Flow（L/min)	15~20	15~20
Efficiency	89%	89%
Power Factor	0.87	0.87
Shell Protection Grade	IP23	IP23
Insulation Grade	H	H

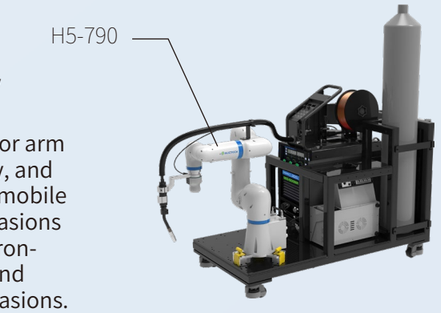
Product Introduction

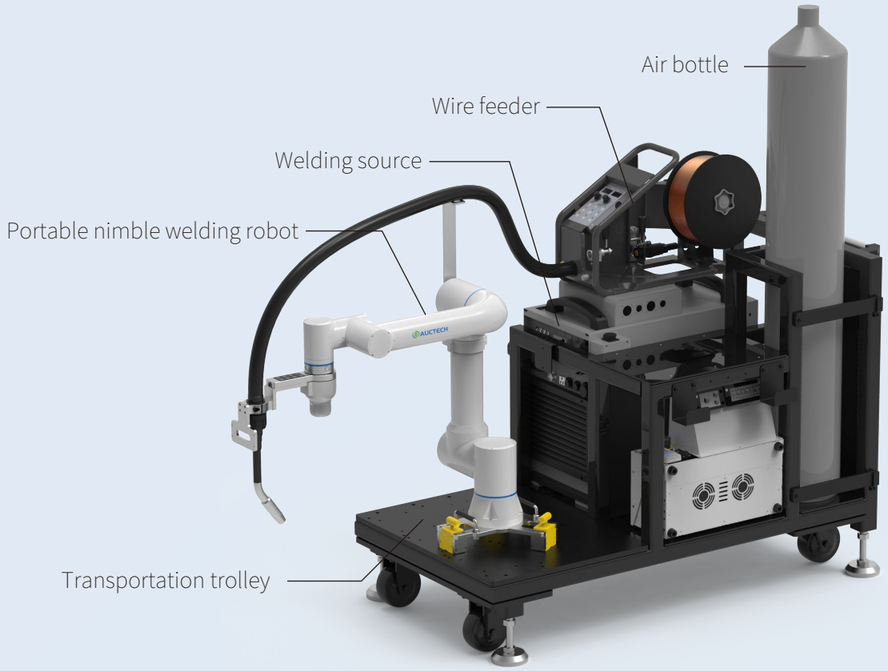
Mobile Welding Trolley

By virtue of portable nimble manipulator arm and magnetic base, it can move flexibly, and can be installed in any environment. A mobile welding trolley can switch working occasions rapidly, suitable for steel member environments, such as vessels, section steels and narrow and semi-closed space and occasions.

- Configurable industrial collaborative welding robot:

  H5-790
  H10-1500





Product Advantage

Portable and movable
It can be moved after welding without occupying fixed space, and the magnetic base can be fixed on the steel plate in any direction.

Easy to learn and use
Dragging teaching points and welding process package are equiped, allowing the average operator to become proficient after 3 to 5 days of training.

Efficient and convenient
Using the welding mode of GMAW, a commissioning staff can operate 2 to 4 welding robots to weld simultaneously.

Various configuration
Multiple welding configurations are supported to fit various metal plate workpieces in different thickness and materials.

Safe, reliable, and efficient
An industrial collaborative robot has good rigidity and faster speed, and its self crashing detection function ensures safe and smooth man-machine collaboration.

Widely applied
It is especially suitable for welding in confined space, and also for small batch, multi-variety and frequently changing production modes.

Product Parameter

Robot model	H5-790	H10-1500
Payload	5kg	10kg
Robot arm length	785mm	1455mm
Robot weight	24kg	55kg
Max output current of welding source❶	350A	500A
Cooling mode for welding gun	Air cooling	Water cooling
Using mode	Mobile	
Size of vision-control integrated control cabinet for robot	373mm*273mm*165mm	
Automatic pass ranking for multi-layer and multi-pass welding	Yes	

❶ Note: 350A type only supports air cooling, 500A type with air cooling as standard, and water cooling is optional.

Product Introduction

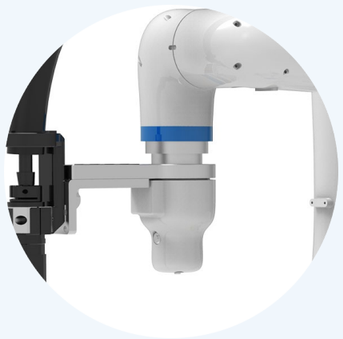
Portable Nimble Welding Robot

- **Light design**
  A manipulator arm weighs 23kg so as to easily change the robot welding station. The integration of the welding station with the vehicle allows the rapid switch of working environment.
- **Dragging teaching**
  Flexible dragging teaching can be realized. Cartesian dragging and joint dragging can be used to find the position of weld seams quickly and accurately, and the position information can be rapidly recorded by the dragging teaching button on the dragging handle.
- **Multi-function welding process package**
  It can quickly configure welding source parameters and process parameters, and support multiple weaving welding ways and multi-layer and multi-pass welding process.

Product Accessories

Magnetic base

Portable, mobile, convenient, safe and reliable (only available to H5-790)



Flexible force control dragging

Convenient and efficient due to simple teaching

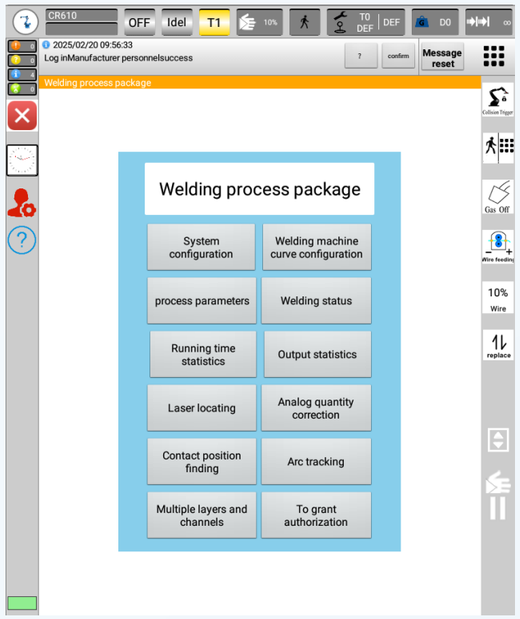
List of Standard Configuration

No.	Description	Quantity	Remark
1	H5-790	1	Body
2	2.0 machine integrating drive and control functions	1	Cabinet
3	Welding source	1	It is compatible with many welding sources in the market (Megmeet, Aotai, Bingo, Panasonic, etc.)
4	Manual wire feeder	1	Wire feeder and air valve
5	Welding gun	1	Air/water cooling
6	1.5m wire guide pipe	1	
7	Integrated cable	1	Positive pole+air pipe+communication cable for wire feeder
8	Welding ground wire	1	3m length
9	Communication wire between welding source and robot	1	
10	Magnetic base	1	Optional
11	Dragging handle+six-dimensional sensor	1	

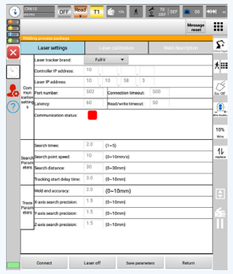
Process System

Functions of Welding Process System

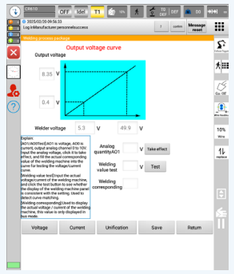
Independently researched and developed by AUCTECH Robotics, the welding process package integrates multiple shorthand instructions with a concise operation interface. The language of welding instructions can be randomly switched between Chinese and English, and it is easy to use with convenient operation and commissioning.



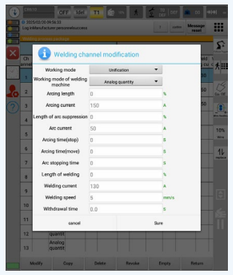
Welding process package



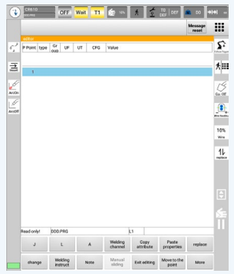
Rapid configuration for welding source



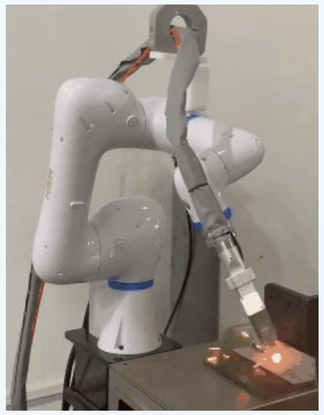
Welding source curve setting



Welding pass setting



Welding instruction quick setup



Features of Welding Process System

- **Strong accessibility and high commissioning efficiency**

  1. It can be operated according to icons conveniently with fast teaching programming, and allows blind operation;
  2. There are many methods for parameter editing and commissioning with high efficiency.

- **High operation efficiency of robot**

  1. The robot control system applies the self-adaptive algorithm to ensure robot stability and failure-free operation;
  2. The arc starting mechanism design is optimized, shortening the arc starting time from 800ms to 400ms;
  3. The arc starting function that involves a flying process improves the welding beat.

- **High safety of robot**

  1. The system designs 3 security modes to greatly reduce the frequency of machine crashing;
  2. The system intelligently examines whether a welding instruction is right or not to ensure the security.

- **Comprehensive welding functions**

  1. Robot and positioner weld collaboratively to ensure welding quality and efficiency;
  2. Functions to randomly jump and to detect when moving forward or backward enhance commissioning efficiency;
  3. The function to edit a batch parameter increases teaching efficiency.

- **Functions of thin plate**

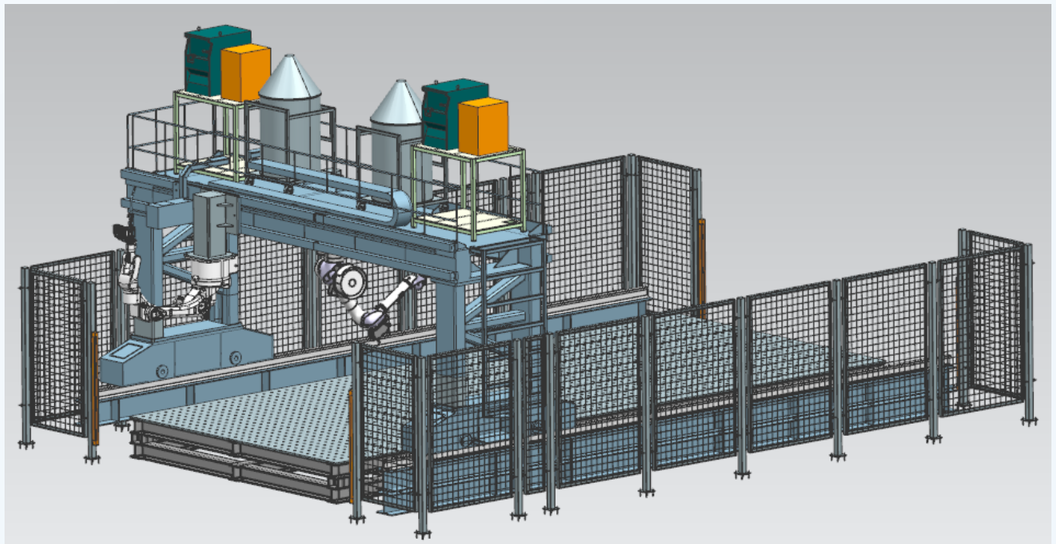
  Straight fish-scale welding and circular fish-scale welding can guarantee a good effect under low current, which are of high tolerance to gaps.

- **Functions of medium-thick plate**

  1. Straight weaving welding and circular weaving welding guarantee pass penetration and forming at the pass surface;
  2. Intelligent weaving frequency plan and intelligent automatic weaving planes are available, saving cost and enhancing commissioning efficiency for customers;
  3. Off-line programming, parameterized programming, 3D scanning, and weld seam tracking solve steel structure problems in various kinds and small batch.

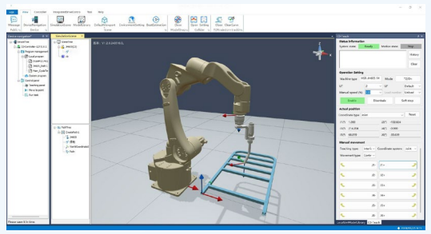
Process System

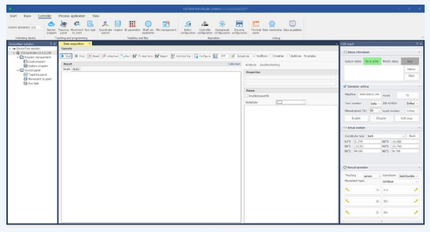
Gantry Teaching-free Welding Platform



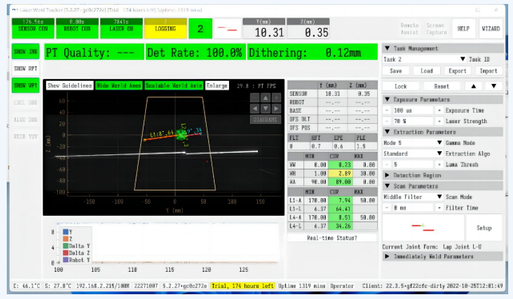
Online Simulated Track

HSR-Studio industrial simulated software is used to introduce digital models and produce weld seam tracks.

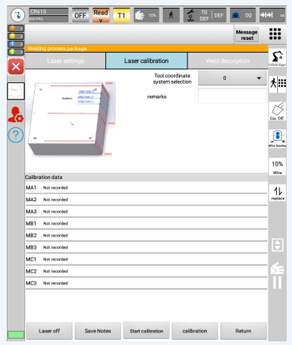




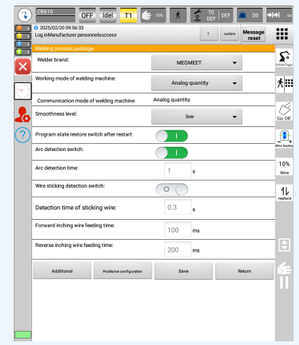
Weld Seam Identification



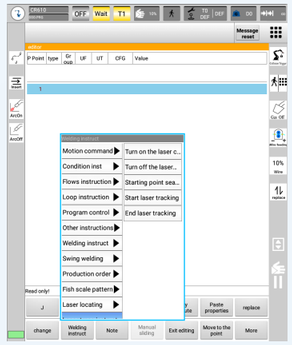
Laser Tracking



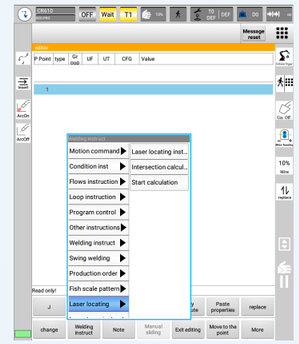
Laser tracking and robot calibration interface



Setting interface for laser tracking parameters



Laser tracking instruction



Laser locating instruction

Application Case